

TEMASEK POLYTECHNIC

SCHOOL OF INFORMATICS & IT

VIRTUAL DESKTOP TECHNOLOGY

Practical 3

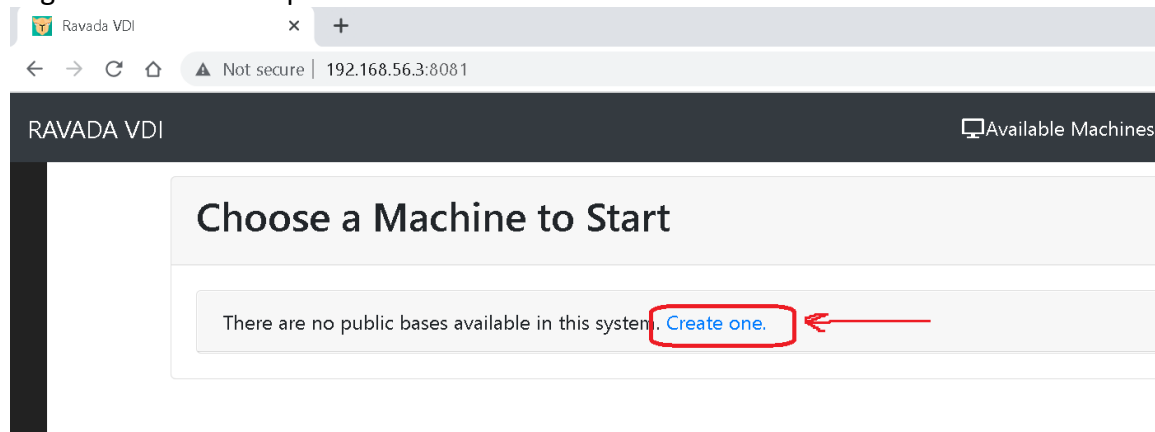
Dear students,

- Please ensure to complete these Labs as they will be part of your final project report and POC.
- Please remember to take all **important screen shots** of each Lab to build up your final project report and POC.
- Please also remember to use virtual box **clone feature** to back up your Ravada VM after each Lab to prevent any corruption.
- Please copy all Linux commands in these Labs to **notepad** first, **ensure all syntax is correct** before copying to Linux Command prompt.

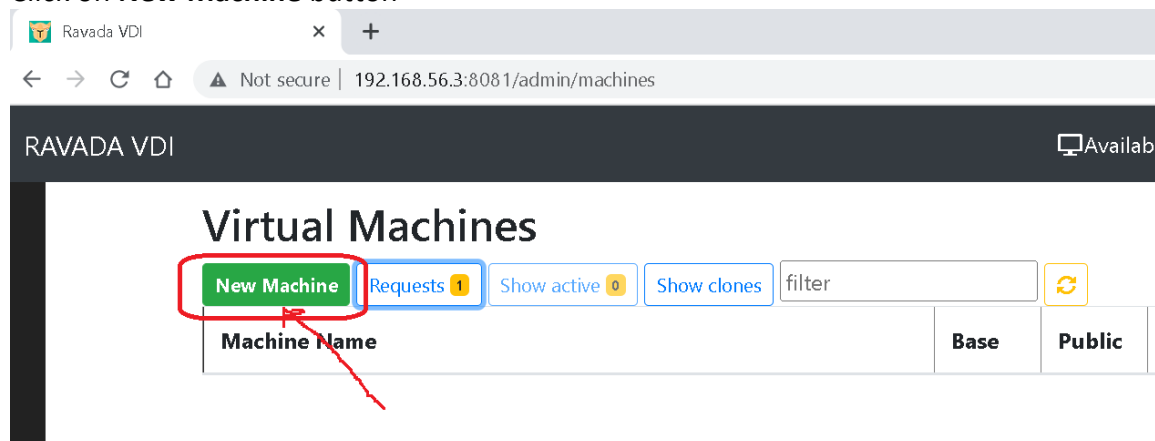
Setting up Windows 10 VDI Base Image

Step 1

Login to Ravada web portal and click on **Create One**



Click on **New Machine** button



Configure **Windows 10 VDI** specs as below:

- 4GB RAM
- Hard disk size 25GB

Click on the **Create** button

From Template **From Machine**

Backend KVM

Select Template ⓘ

Windows 10

Windows 10 64 bits. Requires an user provided ISO image.[\[help\]](#)

Select ISO ⓘ ↺

/var/lib/libvirt/images/windows10.iso

Name

Windows10

Ram: (GB)

4

System Disk: (GB)

25

The Minimum Disk Size needed for this ISO is 21GB.

Disable Swap and Data partitions

Advanced options ☒

Swap (disabled)

1

Enable

Content will be cleaned on restore and shutdown

Data (disabled)

1

Enable

Content will be kept on restore

BIOS Legacy ▾

Machine pc ▾

Start ☐ Start after create the virtual machine

Cancel





Create

Go back and modify Windows 10 VDI specs

RAVADA VDI

Virtual Machines

New Machine Requests Show active Show clones filter

Machine Name	Base	Public	Status	Actions
Windows10	<input type="checkbox"/>		Down now	   

Modify Windows 10 VDI CPU settings to 2 CPUs

RAVADA VDI

Virtual Machine **Windows10** Settings

Actions

Description

Rename

Options

Hardware

Screenshot

Graphics

Base

Copy

Max memory (MB) 4096

Current memory (MB) 4096

CPU 2

Run Timeout

Shutdown Timeout

Autostart

Shutdown disconnected

Owner admin

The machine will shutdown after these minutes

The machine will power off after this minutes after shutdown.

Virtual Machine will start on host start.

Virtual Machine will be shutdown when user disconnects.

Change the owner of the machine

Modify Windows 10 VDI network card to Intel e1000

RAVADA VDI

Virtual Machine **Windows10** Settings

Description

Rename

Options

Hardware

Graphics

Base

ens3

bus e1000 type NAT nat default

Apply Accept Close

Modify Windows 10 VDI hard disks to IDE or SATA

RAVADA VDI

Virtual Machine **Windows10** Settings

Actions

Description

Rename

Options

Hardware

Screenshot

Graphics



Windows10-vda-zplg.qcow2

bus

ide

capacity

25G

boot order

1

cache

unsafe

Apply

Accept

Close

Step 2

Select the **Play** button to start the VM

Select the **View** button for more information about the VM

RAVADA VDI

Virtual Machines

New Machine Requests Show active Show clones filter

Machine Name	Base	Public	Status	Actions
Windows10	<input type="checkbox"/>		Running 192.168.56.1	

View

Play

Copy down the **Password** and **Display URL** for the VM

RAVADA VDI

Running Windows10

A viewer is required to run the virtual machines. [Read more.](#)

Display

spice

- The password for this virtual machine connection is :
- Display URL :** <spice://192.168.56.3:5900>
- Display IP :** 192.168.56.3
- Display Port :** 5900

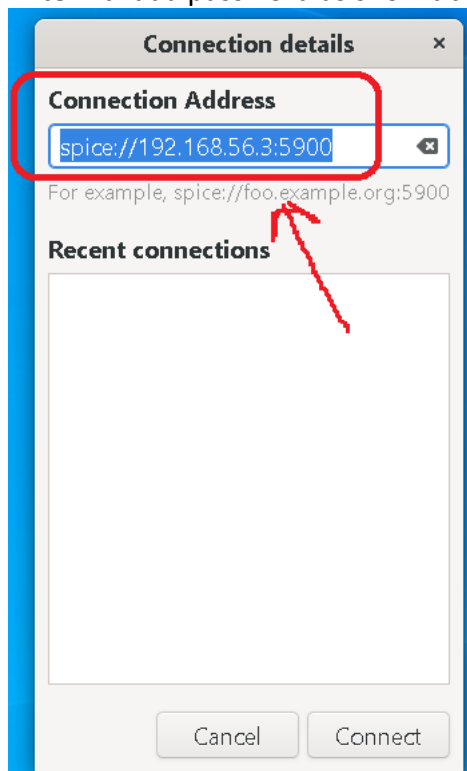
view

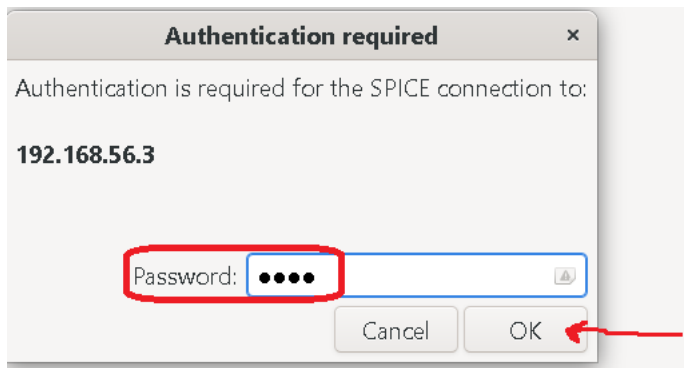
Step 3

Run Virt-viewer

Enter Connection Address which is Ravada Display URL

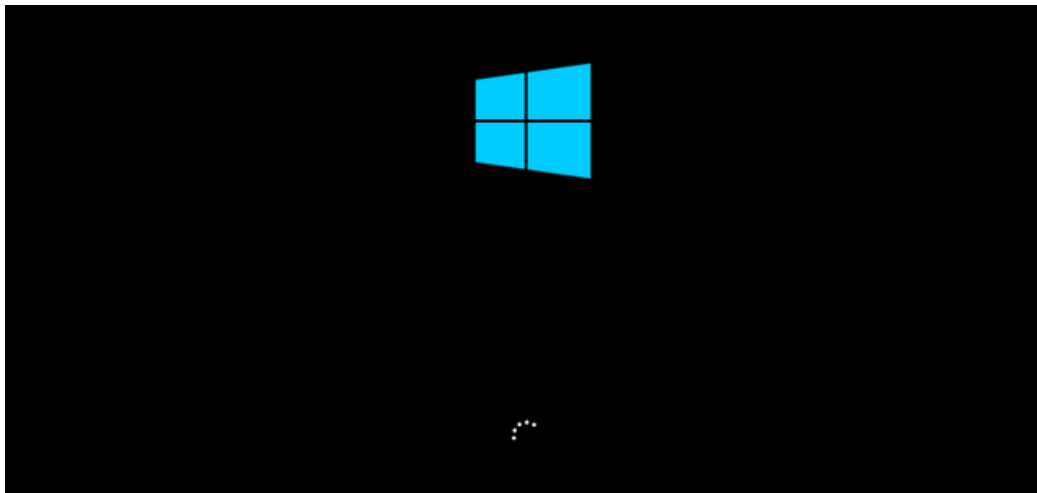
Enter Ravada password as show above



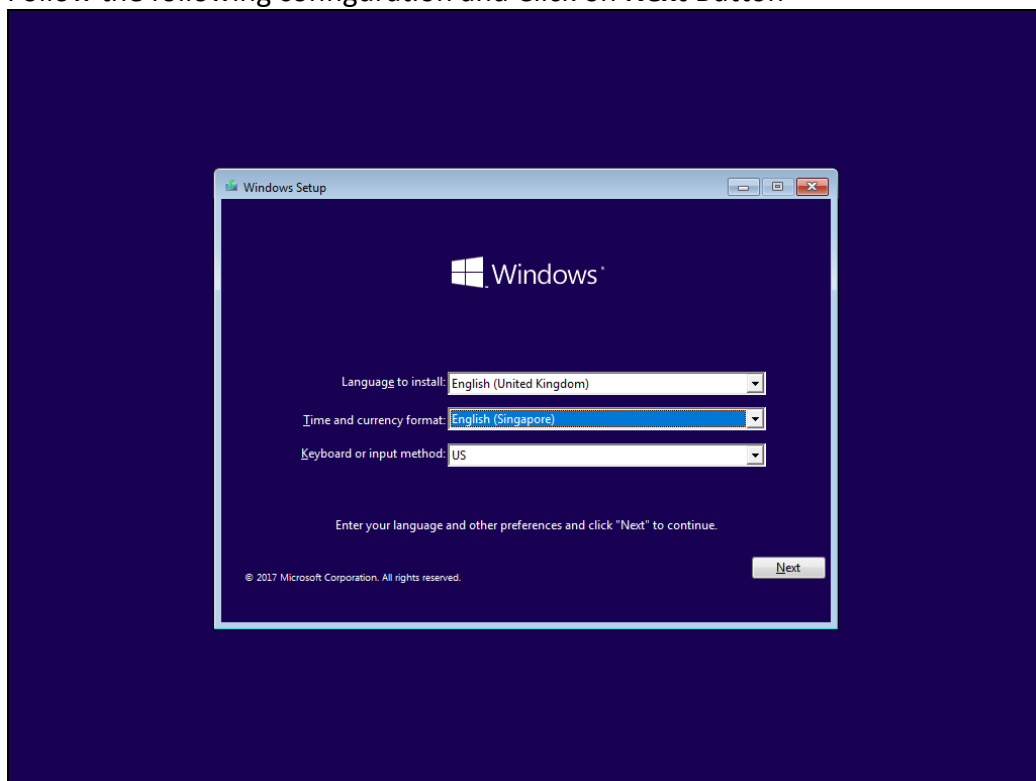


Step 4

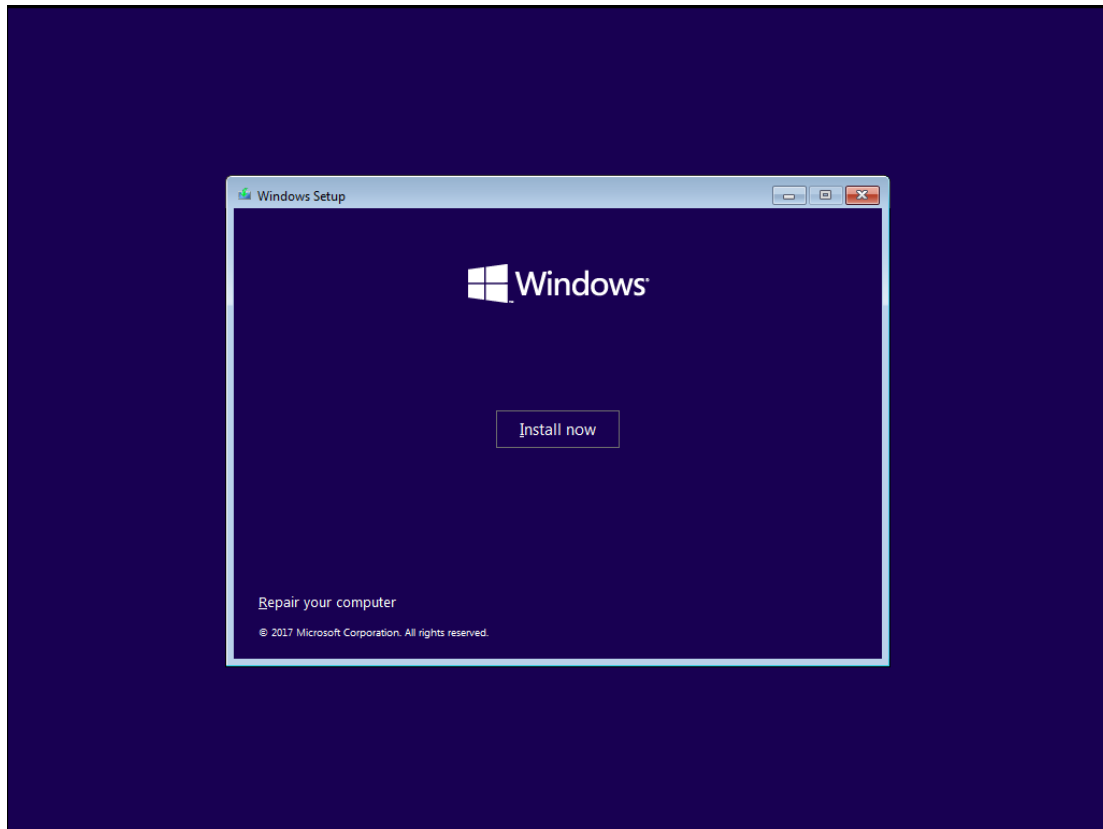
Start Windows 10 VDI installation



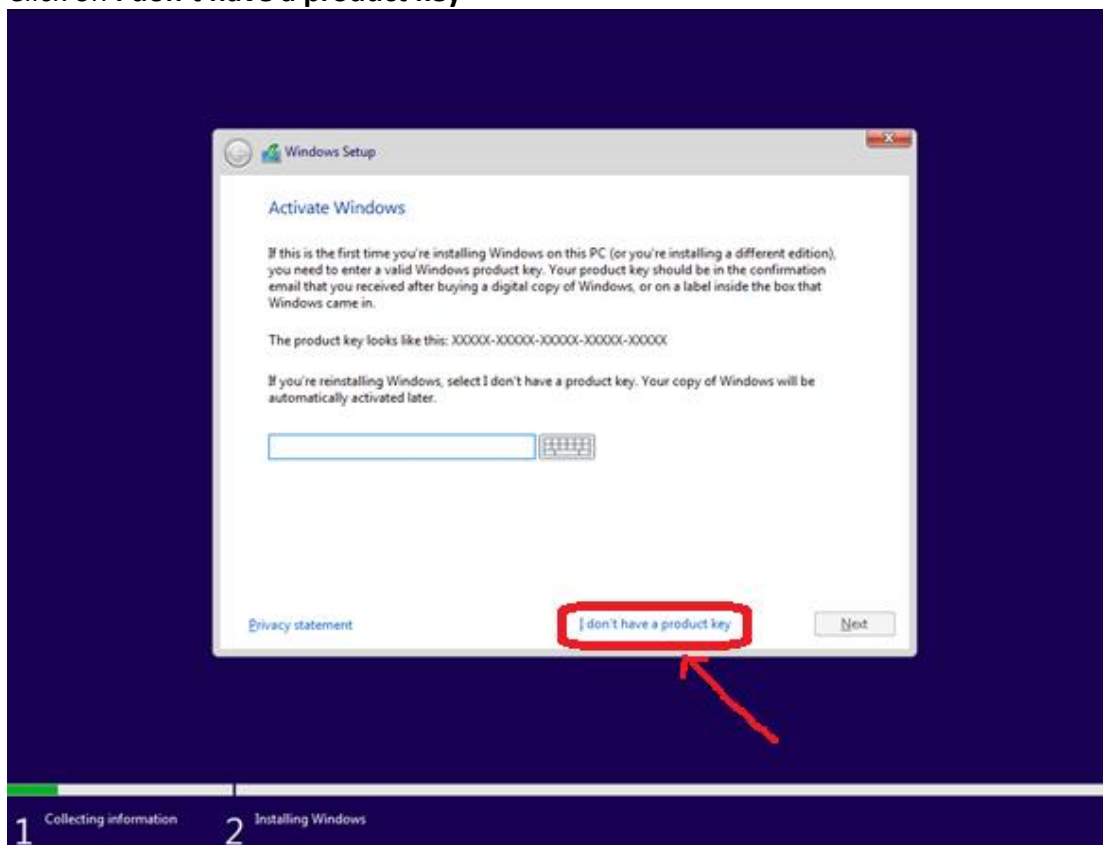
Follow the following configuration and Click on **Next** Button



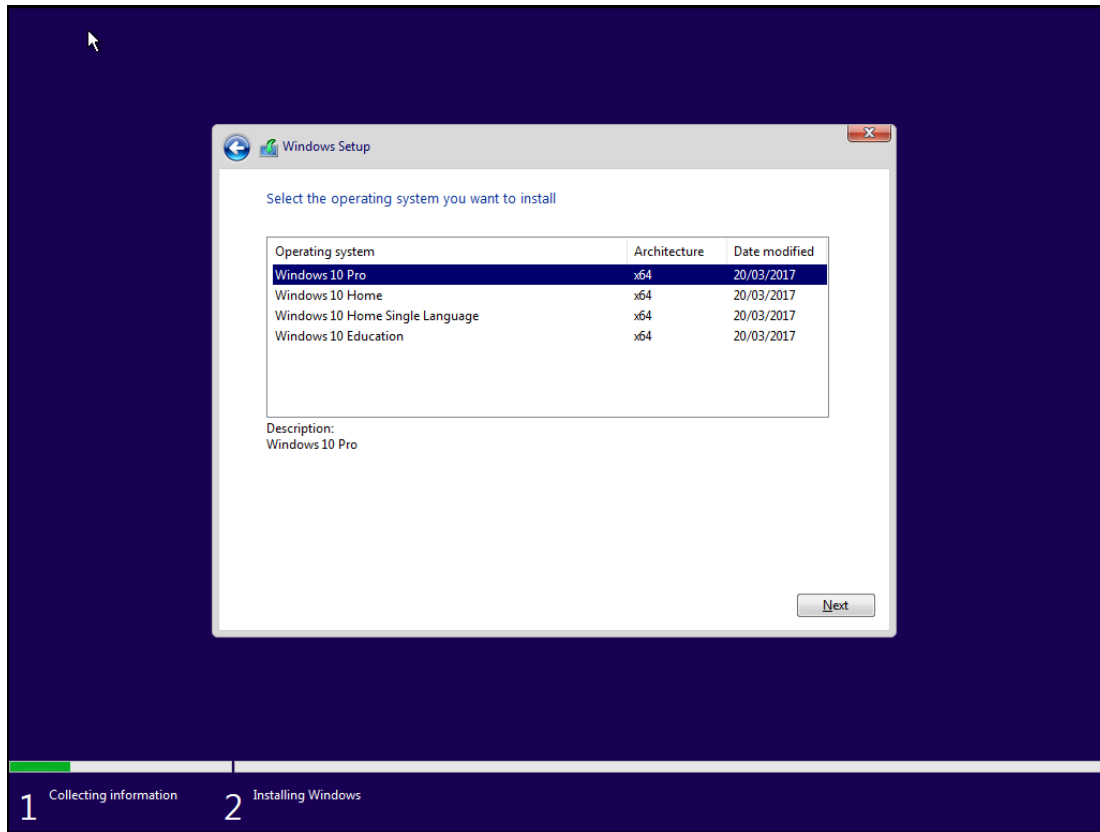
Click on **Install now** button



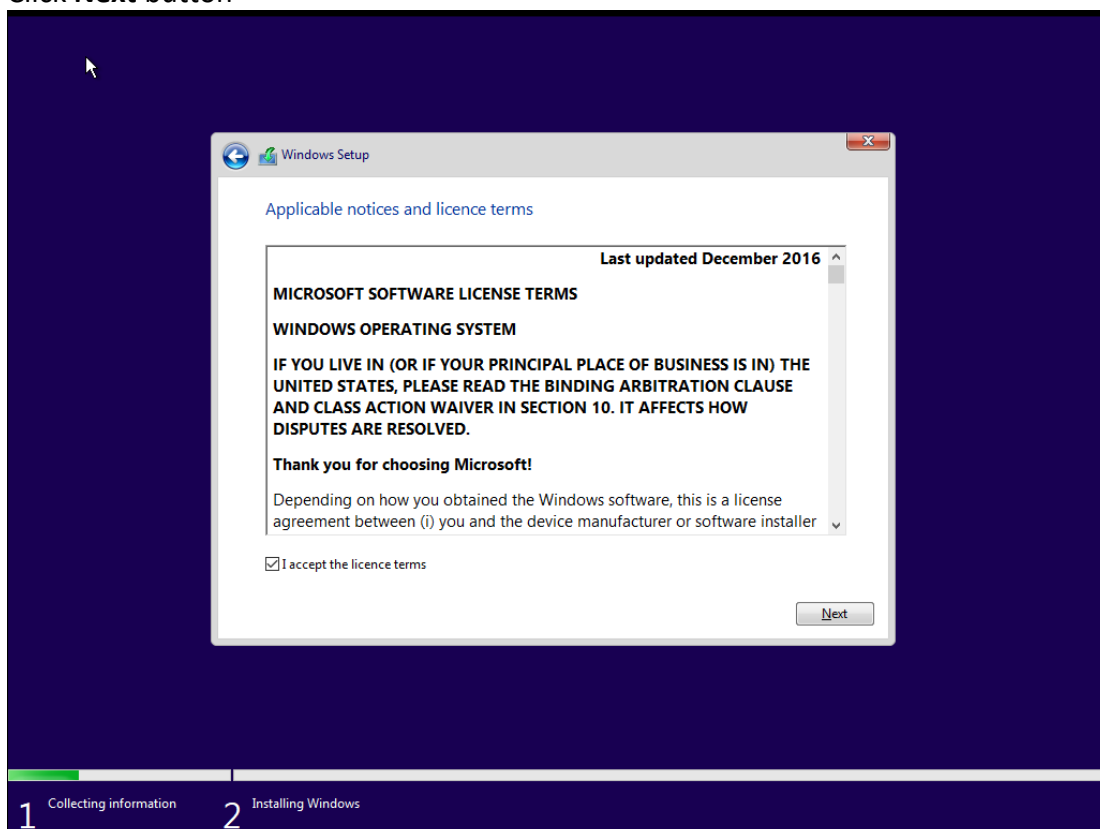
Click on **I don't have a product key**



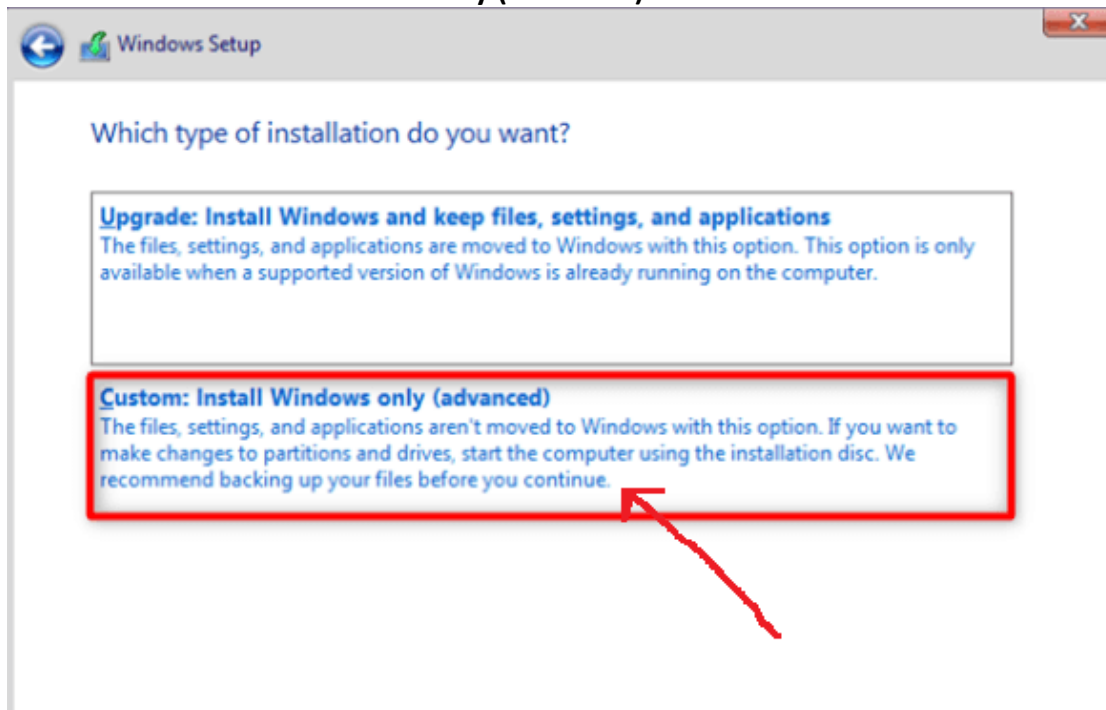
Click **Next** button



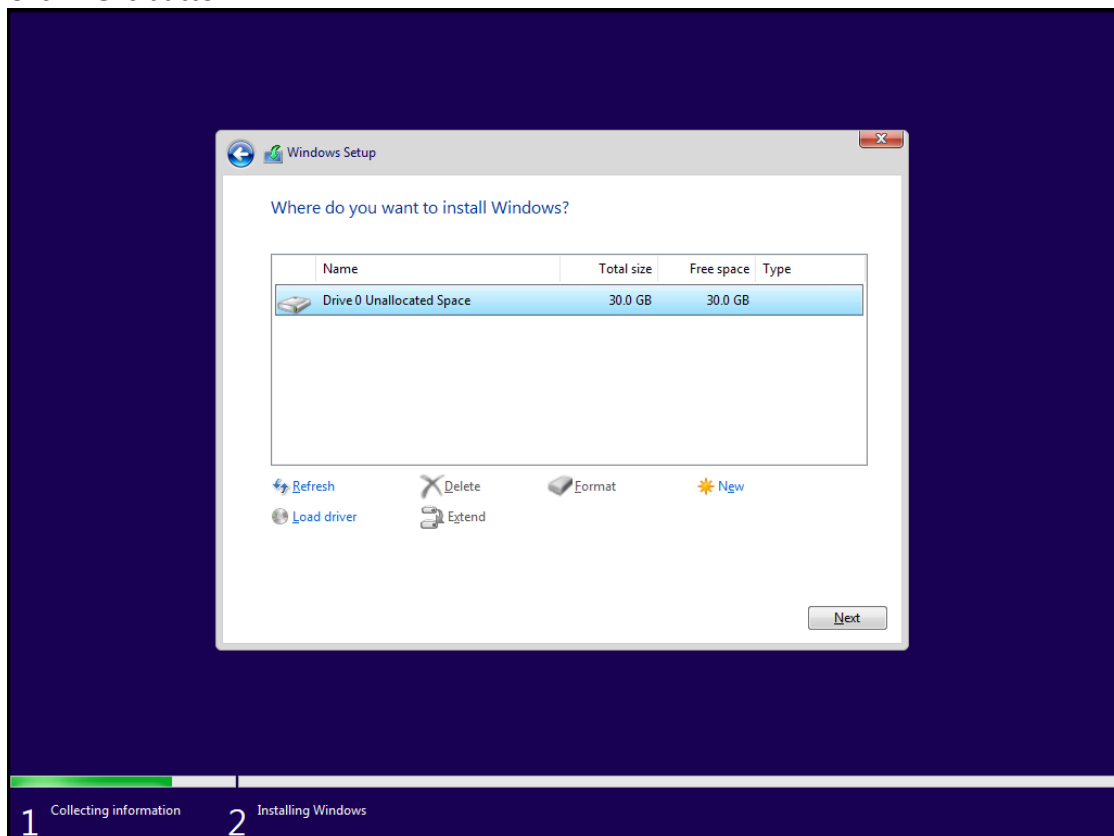
Check on **I accept the licence terms**
Click **Next** button



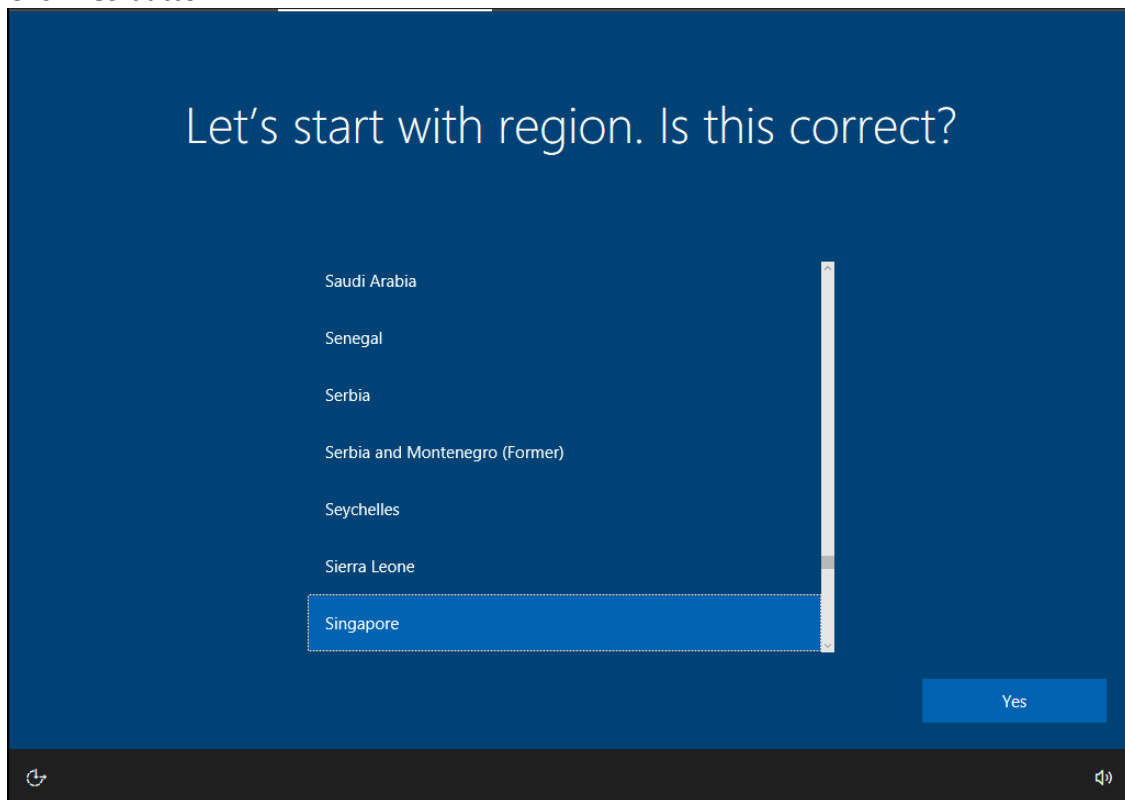
Select Custom: Install Windows only (advanced)



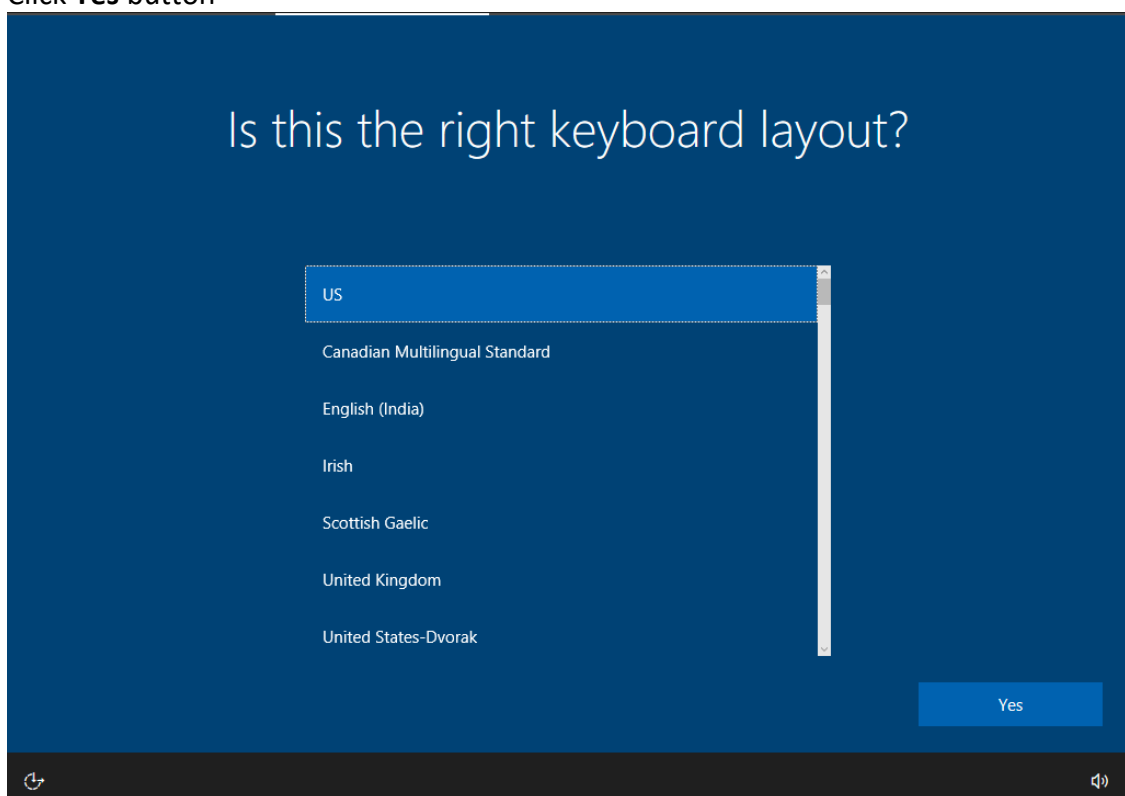
Click **Next** button



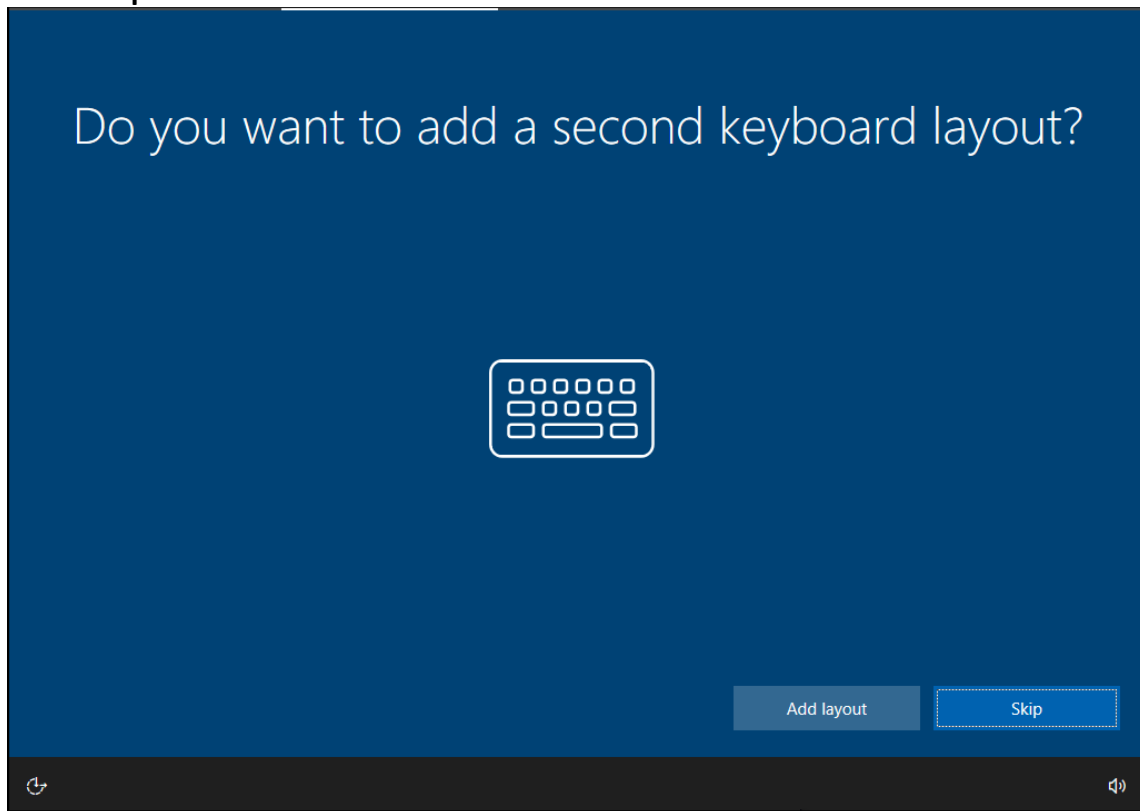
Select **Singapore**
Click **Yes** button



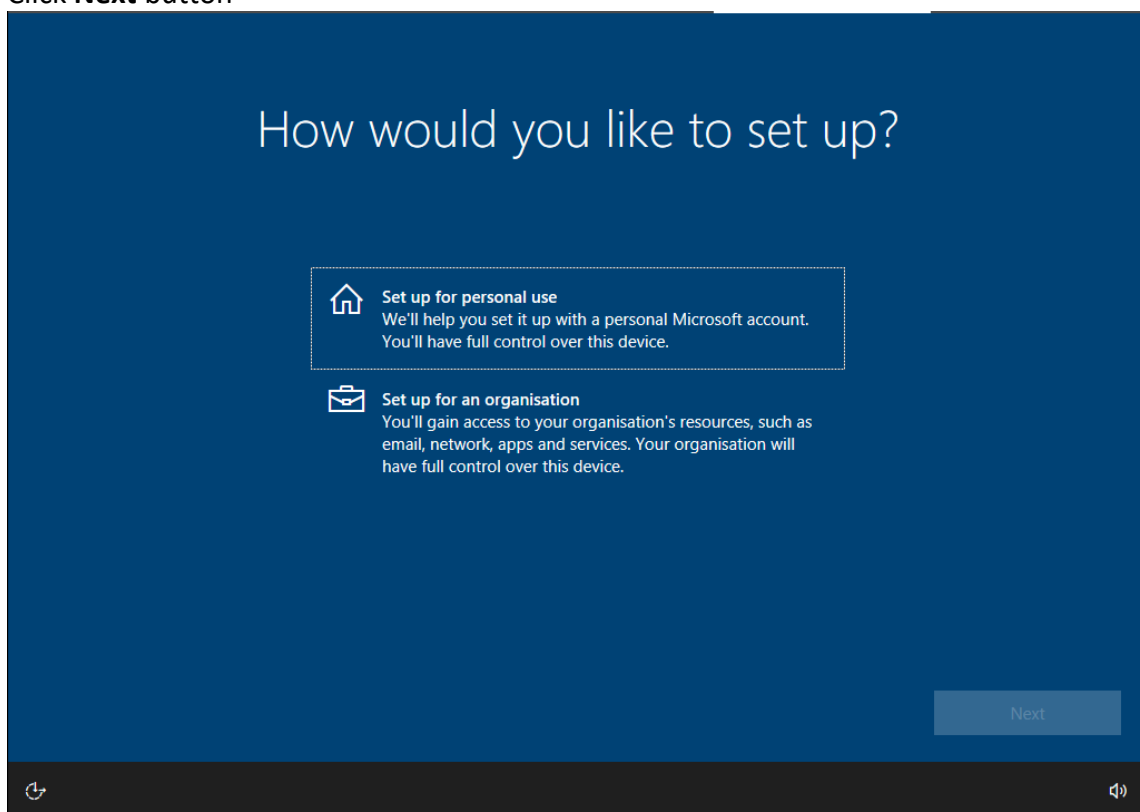
Select **US**
Click **Yes** button



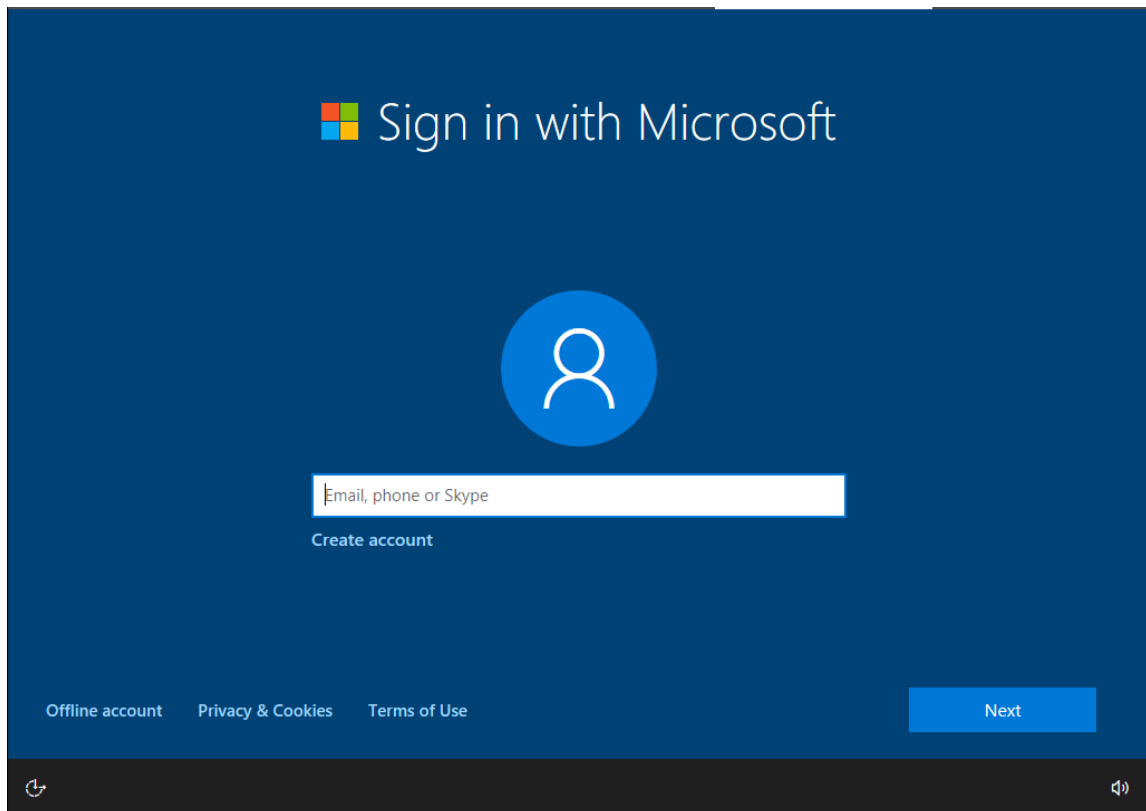
Select **Skip**



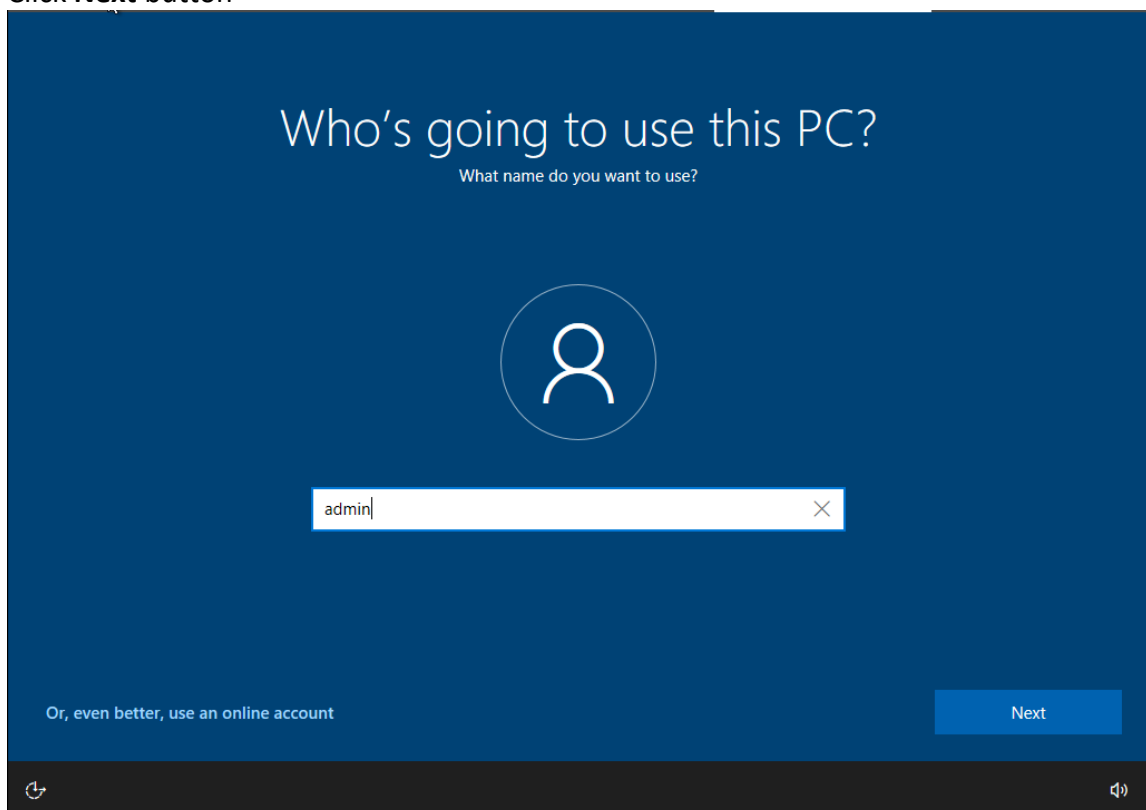
Select **Set up for personal use**
Click **Next** button



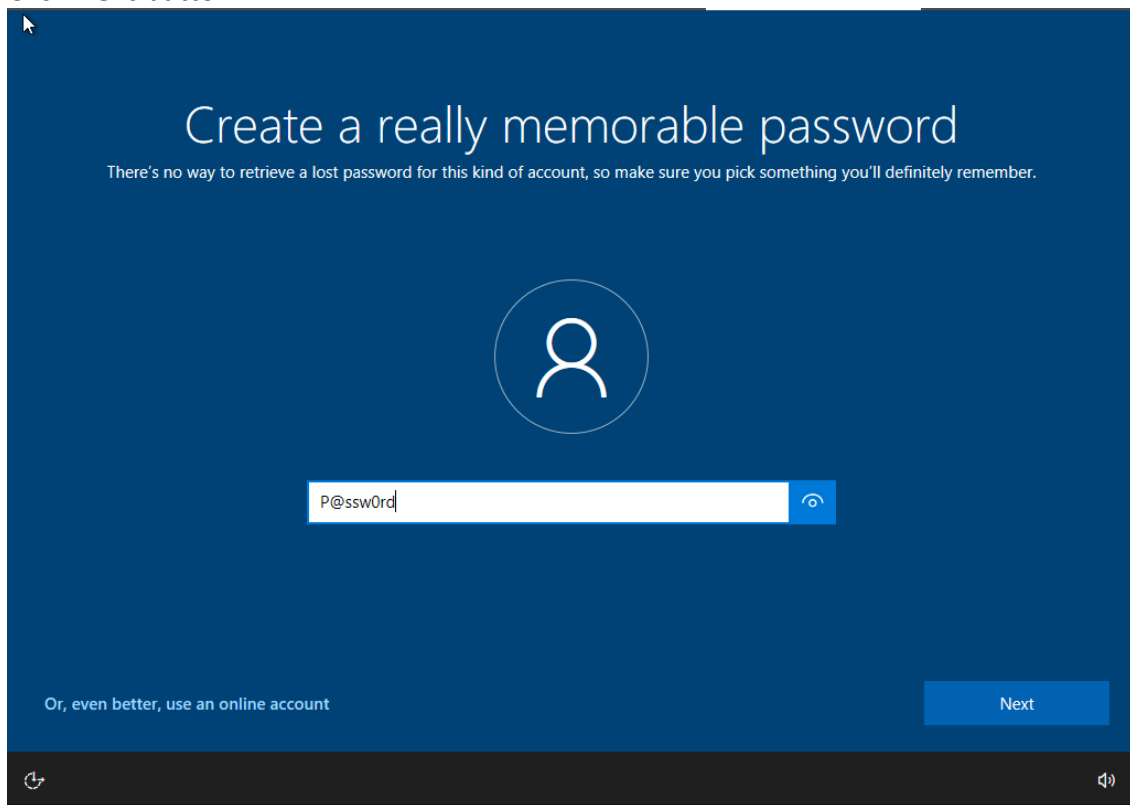
Select **Offline account**



Key in **admin**
Click **Next** button

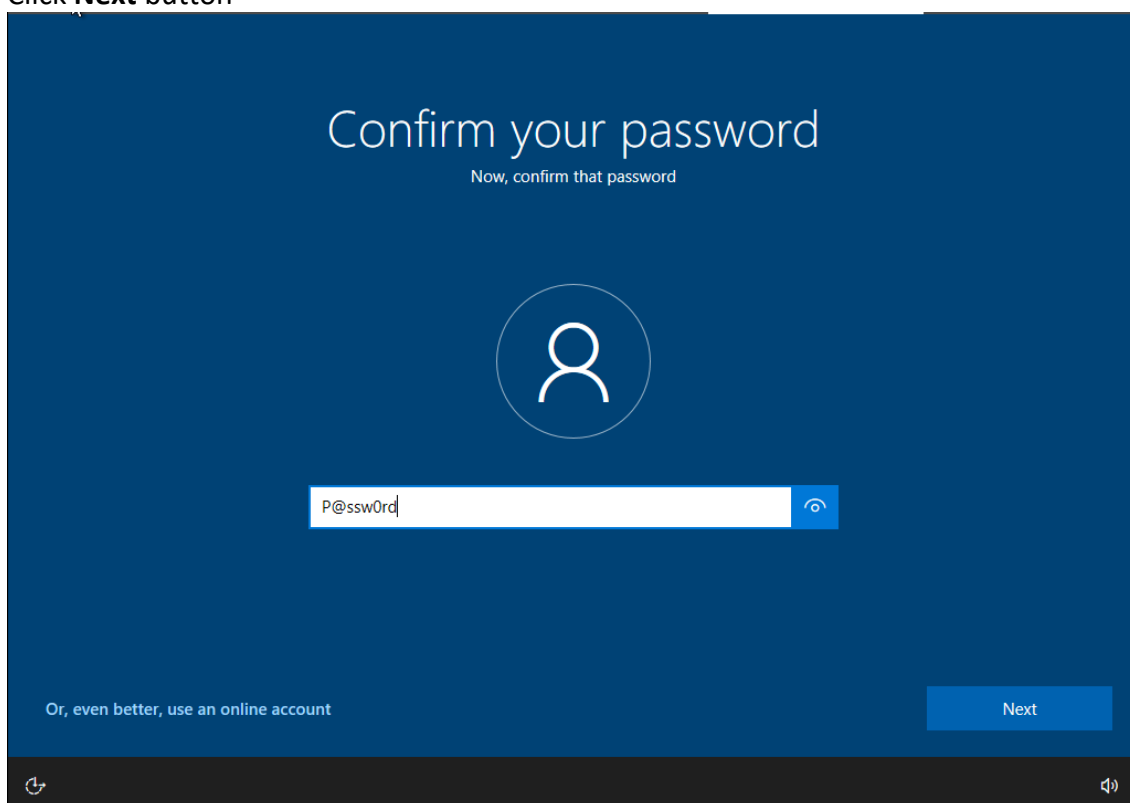


Key in **P@ssw0rd**
Click **Next** button



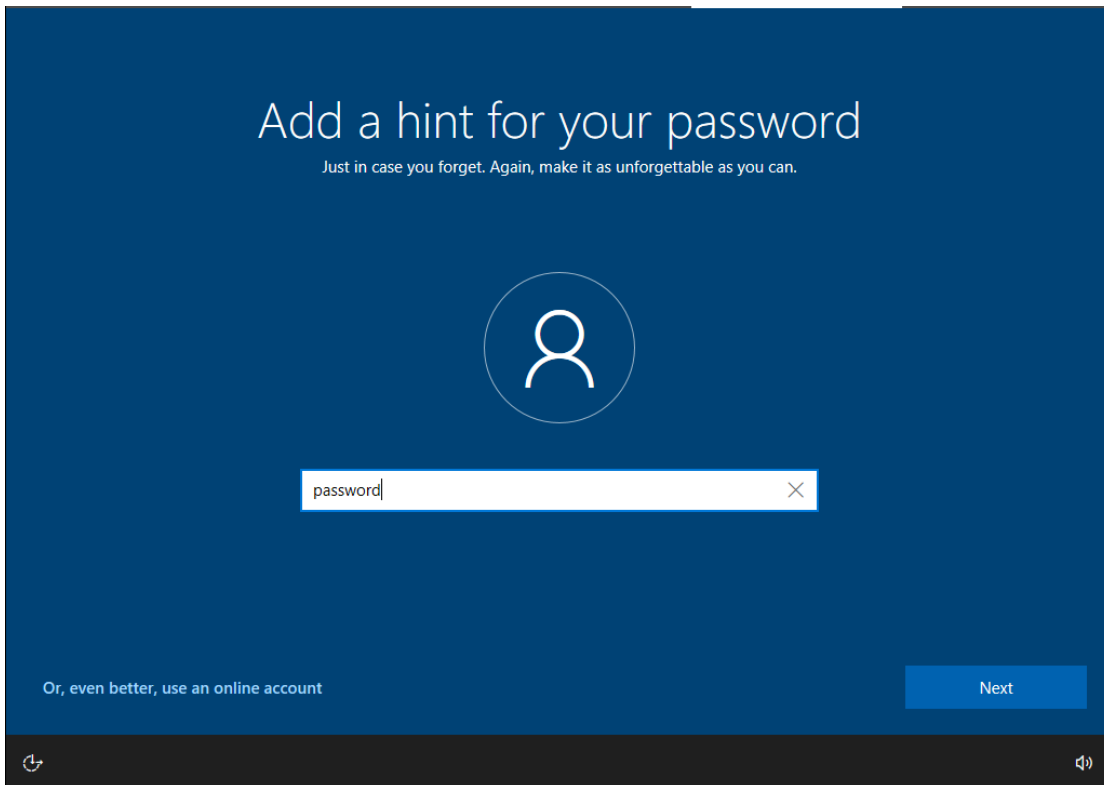
This screenshot shows the 'Create a really memorable password' screen in Windows 10. The background is a solid blue color. At the top, the title 'Create a really memorable password' is displayed in white, followed by a subtitle: 'There's no way to retrieve a lost password for this kind of account, so make sure you pick something you'll definitely remember.' In the center, there is a white circular icon representing a person. Below this icon is a white password input field containing the text 'P@ssw0rd'. To the right of the input field is a blue eye icon for toggling password visibility. At the bottom left, there is a link that says 'Or, even better, use an online account'. At the bottom right, there is a blue 'Next' button. The bottom of the screen features a dark grey taskbar with a circular arrow icon on the left and a speaker icon on the right.

Key in **P@ssw0rd**
Click **Next** button



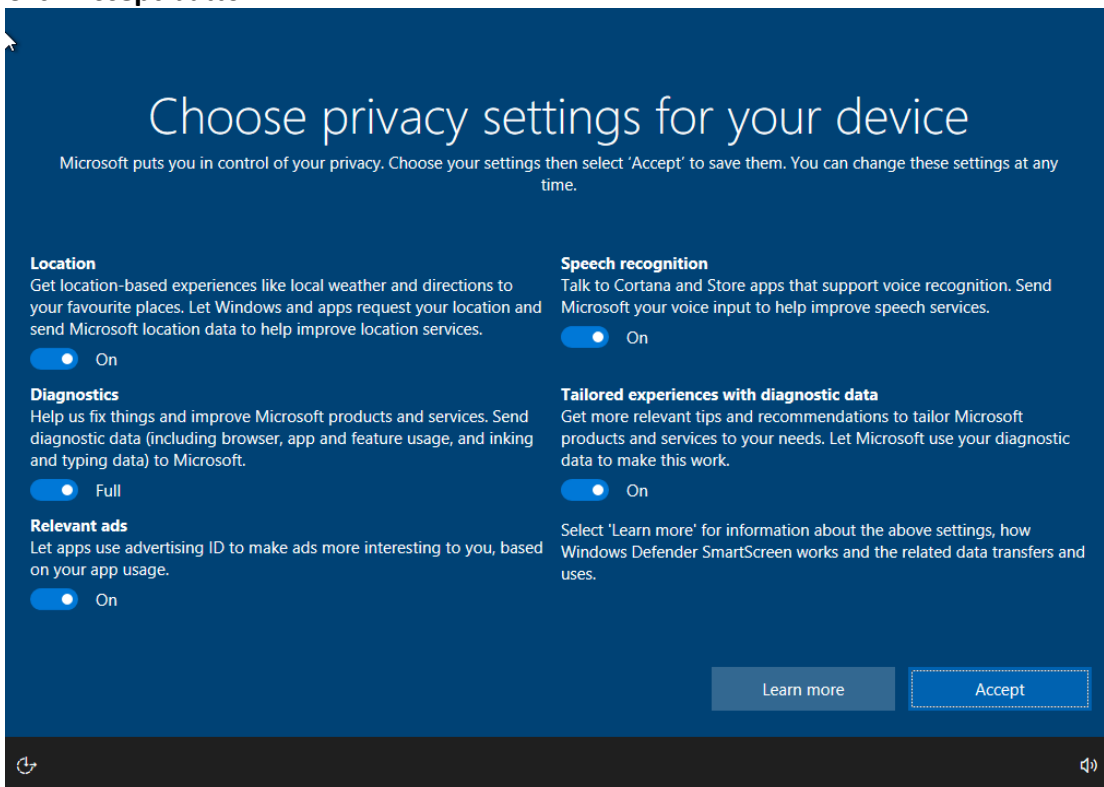
This screenshot shows the 'Confirm your password' screen in Windows 10. The background is a solid blue color. At the top, the title 'Confirm your password' is displayed in white, followed by a subtitle: 'Now, confirm that password'. In the center, there is a white circular icon representing a person. Below this icon is a white password input field containing the text 'P@ssw0rd'. To the right of the input field is a blue eye icon for toggling password visibility. At the bottom left, there is a link that says 'Or, even better, use an online account'. At the bottom right, there is a blue 'Next' button. The bottom of the screen features a dark grey taskbar with a circular arrow icon on the left and a speaker icon on the right.

Key in **password**
Click **Next** button



The screenshot shows a Windows login screen with a blue background. At the top, it says "Add a hint for your password" in white text, followed by a smaller line: "Just in case you forget. Again, make it as unforgettable as you can." Below this is a circular icon representing a person. Underneath the icon is a white text input field containing the word "password" and a small 'X' icon to its right. At the bottom left, there is a link that says "Or, even better, use an online account". At the bottom right, there is a blue button labeled "Next". The bottom of the screen features a dark taskbar with a circular arrow icon on the left and a speaker icon on the right.

Click **Accept** button



The screenshot shows a Windows screen titled "Choose privacy settings for your device" in white text on a blue background. Below the title is a paragraph: "Microsoft puts you in control of your privacy. Choose your settings then select 'Accept' to save them. You can change these settings at any time." The screen is divided into four sections, each with a toggle switch:

- Location**: "Get location-based experiences like local weather and directions to your favourite places. Let Windows and apps request your location and send Microsoft location data to help improve location services." The toggle is set to "On".
- Speech recognition**: "Talk to Cortana and Store apps that support voice recognition. Send Microsoft your voice input to help improve speech services." The toggle is set to "On".
- Diagnostics**: "Help us fix things and improve Microsoft products and services. Send diagnostic data (including browser, app and feature usage, and inking and typing data) to Microsoft." The toggle is set to "Full".
- Tailored experiences with diagnostic data**: "Get more relevant tips and recommendations to tailor Microsoft products and services to your needs. Let Microsoft use your diagnostic data to make this work." The toggle is set to "On".
- Relevant ads**: "Let apps use advertising ID to make ads more interesting to you, based on your app usage." The toggle is set to "On".

At the bottom right, there are two buttons: a grey "Learn more" button and a blue "Accept" button. The bottom of the screen features a dark taskbar with a circular arrow icon on the left and a speaker icon on the right.

Step 5

After Windows 10 VDI OS installation completed.

Use the Windows 10 VDI IE browser to download and install the following 4 software on Windows 10 VDI.

- Libre Office Suite
- Chrome Browser
- Zoom
- Sublime Text IDE

Shutdown Windows 10 VDI after all installations are completed

Step 6

Setting up Base and Public Image

Login to Ravada Web portal

Select Admin tools → Machines

Check on Base to make Windows 10 VDI a Base image

Wait a while for make Base to complete

The screenshot shows the 'Virtual Machines' interface in the Ravada VDI web portal. At the top, there are buttons for 'New Machine', 'Requests' (1), 'Show active' (0), and 'Show clones'. Below these is a table with columns: 'Machine Name', 'Base', 'Public', 'Status', and 'Actions'. The first row is for 'Windows10'. The 'Base' checkbox is checked and highlighted with a red box and an arrow. The 'Public' checkbox is unchecked. The 'Status' column shows a 'Down' button and a '14 minutes' timer. The 'Actions' column contains the text 'This Machine is a base'.

Machine Name	Base	Public	Status	Actions
Windows10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Down 14 minutes	This Machine is a base

Check on Public to make Windows 10 available to VDI users

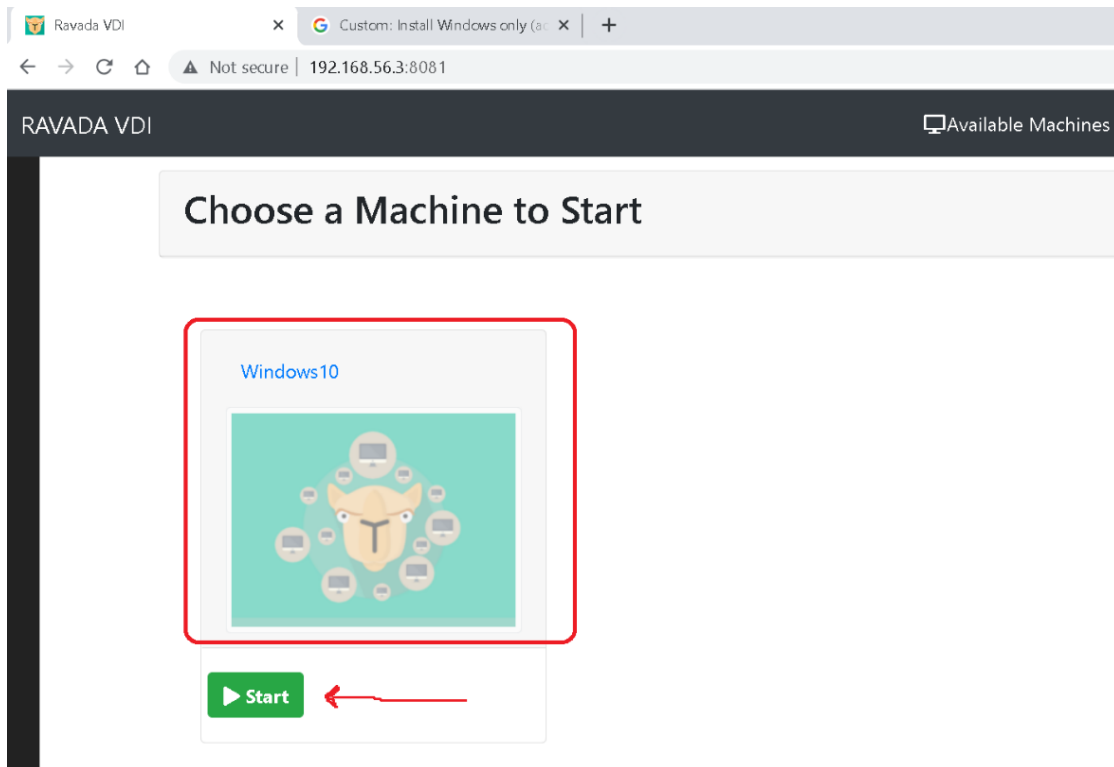
This screenshot is similar to the previous one, but now the 'Public' checkbox for the 'Windows10' machine is checked and highlighted with a red box and an arrow. The 'Status' column now shows a 'Down' button and a '16 minutes' timer.

Machine Name	Base	Public	Status	Actions
Windows10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Down 16 minutes	This Machine is a base

Click on **Available Machine**

You will now see a Windows 10 VDI available

Click start to launch a Windows 10 VDI user instance



Step 7

Repeat Lab 3 procedures and Create Ubuntu VDI Base image

Configure **Ubuntu VDI** specs as below:

- 4GB RAM
- Hard disk size 15GB
- 2 CPUs

Disable Swap and Data partitions

Advanced options ☒

Swap (disabled) 1 **Enable** Content will be cleaned on restore and shutdown

Data (disabled) 1 **Enable** Content will be kept on restore

BIOS Legacy ▾

Machine ubuntu ▾

Start ☐ Start after create the virtual machine

Cancel Create

Modify Ubuntu VDI CPU settings to 2 CPUs

RAVADA VDI Available Machines Admin tools

Virtual Machine Ubuntu Settings

Actions
Description
Rename
Options
Hardware
Screenshot
Graphics
Base
Copy
Ports

Max memory (MB) 4096

Current memory (MB) 4096

CPUs 2

Run Timeout The machine will shutdown after these minutes

Shutdown Timeout The machine will power off after this minutes after shutdown.

Autostart ☐ Virtual Machine will start on host start.

Shutdown disconnected ☐ Virtual Machine will be shutdown when user disconnects.

Owner admin Change the owner of the machine

Modify Ubuntu VDI Network card to Intel e1000

Modify Ubuntu VDI hard disk to IDE or SATA

After Ubuntu VDI OS installation completed.

Install the following 4 software on Ubuntu VDI

- Libre Office Suite
- Chrome Browser
- Zoom
- Sublime Text IDE

Shutdown Ubuntu VDI after all installations are completed

Make Base and make Public for Ubuntu VDI