

# Installing System Configuration Settings

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## Introduction

System Configuration

Boot Drive

Device Drivers

A+

Welcome to the **Installing System Configuration Settings** Practice Lab. In this module you will be provided with the instructions and devices needed to develop your hands-on skills.

## Learning Outcomes

In this module, you will complete the following exercises:

- Exercise 1 - Updating the Device Drivers
- Exercise 2 - Configuring Settings
- Exercise 3 - Performing Windows Refresh
- Exercise 4 - Prepare a Boot Drive
- Exercise 5 - Ensure Prerequisites/Hardware Compatibility

- Exercise 6 - Check for Application Compatibility

After completing this lab, you will be able to:

- Update a Device Driver
- Configure time/date/region/language settings
- Perform Windows Refresh
- Prepare a Boot Drive
- Know about prerequisites/hardware compatibility
- Know about application compatibility

## Exam Objectives

The following exam objectives are covered in this lab:

- **220-1002:** 1.5 - General OS installation and upgradation related Settings

**Note:** Our main focus is to cover the practical, hands-on aspects of the exam objectives. We recommend referring to course material or a search engine to research theoretical topics in more detail.

## Lab Duration

It will take approximately **30 minutes** to complete this lab.

## Help and Support

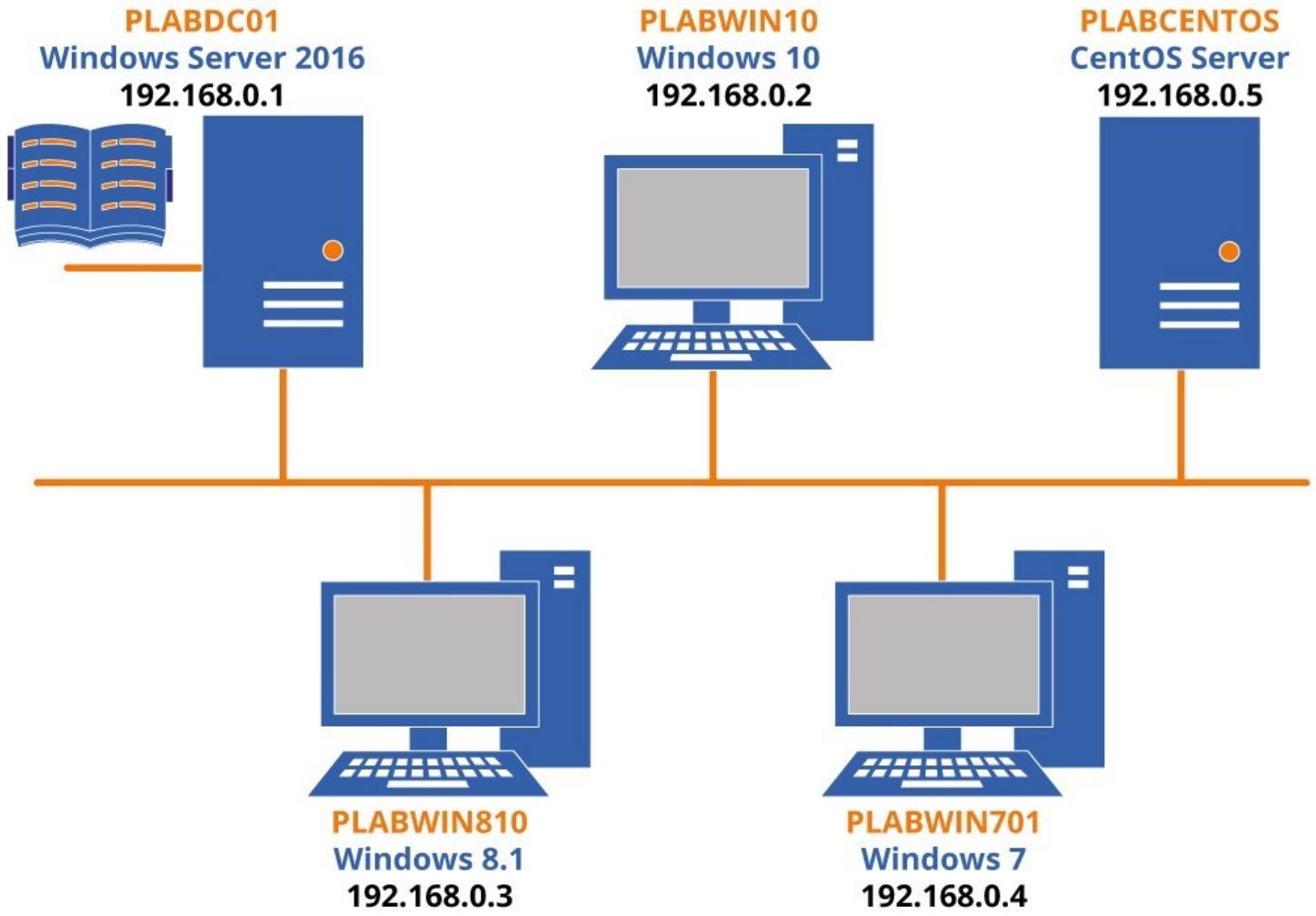
For more information on using Practice Labs, please see our **Help and Support** page. You can also raise a technical support ticket from this page.

Click **Next** to view the Lab topology used in this module.

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## Lab Topology

During your session, you will have access to the following lab configuration.



Depending on the exercises, you may or may not use all of the devices, but they are shown here in the layout to get an overall understanding of the topology of the lab.

- **PLABDC01** - (Windows Server 2016 - Domain Controller)
- **PLABWIN10** - (Windows 10 - Domain Member)
- **PLABCENTOS** - (CentOS Server)
- **PLABWIN810** - (Windows 8.1 - Domain Member)
- **PLABWIN701** - (Windows 7 - Domain Member)

Click **Next** to proceed to the first exercise.

## Exercise 1 - Updating the Device Drivers

A computer system has peripherals devices attached to it. For example:

- CD/DVD drive
- Printer
- Scanner

These peripheral devices need software to function. Each peripheral device has its own device drivers, enabling the device to communicate and work with the operating system.

Software is provided by the manufacturer of the device, along with the hardware at the time of purchase. Software that is not manufactured by the operating system manufacturer is called a third-party software.

Windows maintains a database of device drivers. When a device is installed, if Windows has the device drivers for it, it will install those device drivers. Otherwise, you will have to download and install or use the device drivers provided by the manufacturer.

In this exercise, you will learn to update the device drivers.

## Learning Outcomes

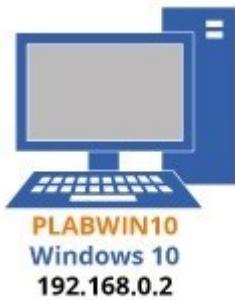
After completing this exercise, you will be able to:

- Update a device driver

## Your Devices

You will be using the following device in this lab. Please power these on.

- **PLABWIN10** - (Windows 10 - Domain Member)



## Task 1 - Update a Device Driver

A device driver can be updated using a different method:

- You can use Windows Update to update the device drivers.
- You can download the updated drivers from the manufacturer's Website and then update it.
- Alternatively, you can update it using the device properties.

In this task, you will use the device properties to update the device drivers.

## **Step 1**

Connect to **PLABWIN10**.

From the **PLABWIN10** desktop, in the search box on the taskbar, type the following text:



Device Manager

Select **Device Manager** from the search results.

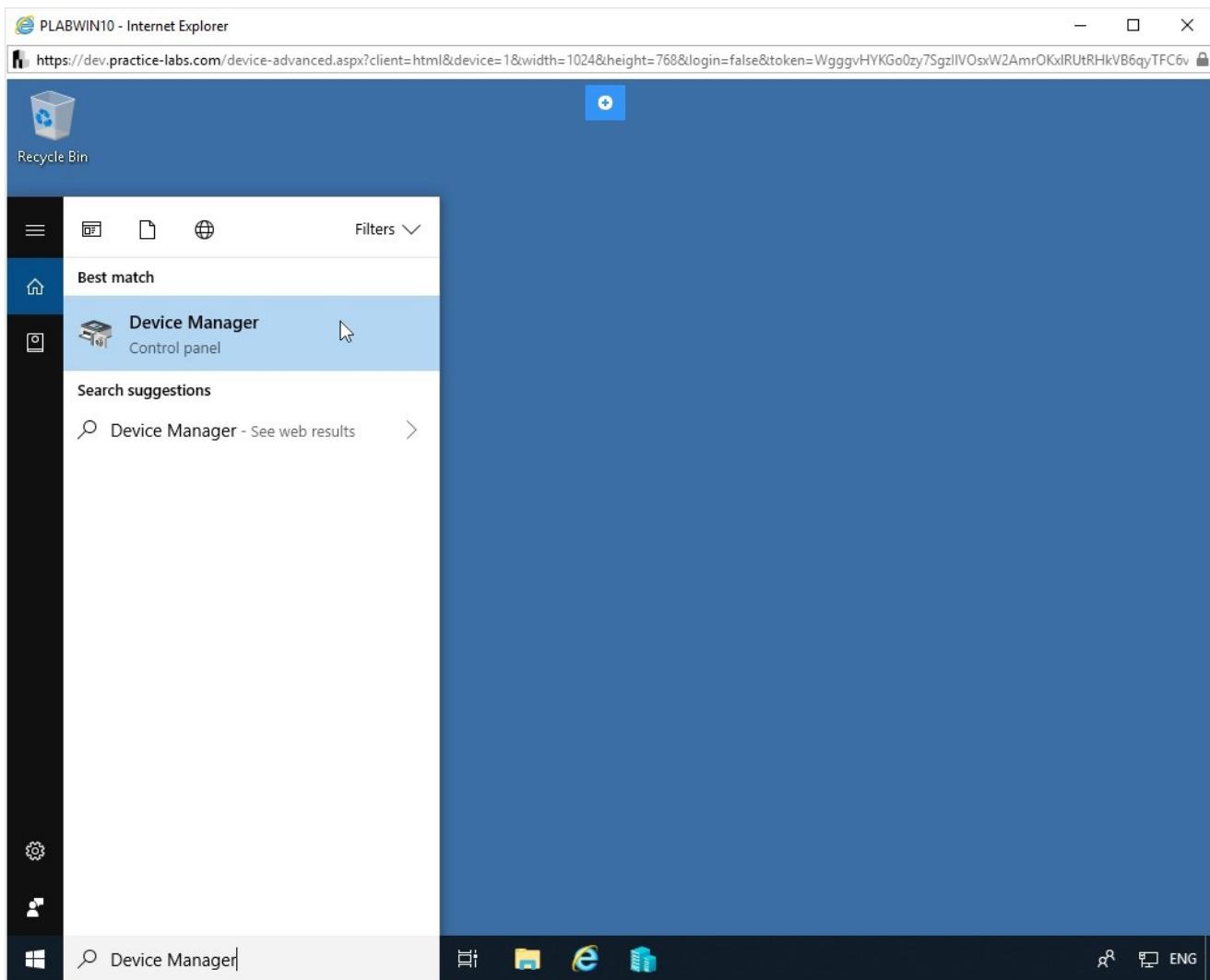


Figure 1.1 Screenshot of device PLABWIN10: Screen shows how to reach the Device manager

## Step 2

The **Device Manager** window is displayed. Expand **Display adapters**.

Then, right-click **Microsoft Hyper-V Video** and select **Update driver** from the context menu.

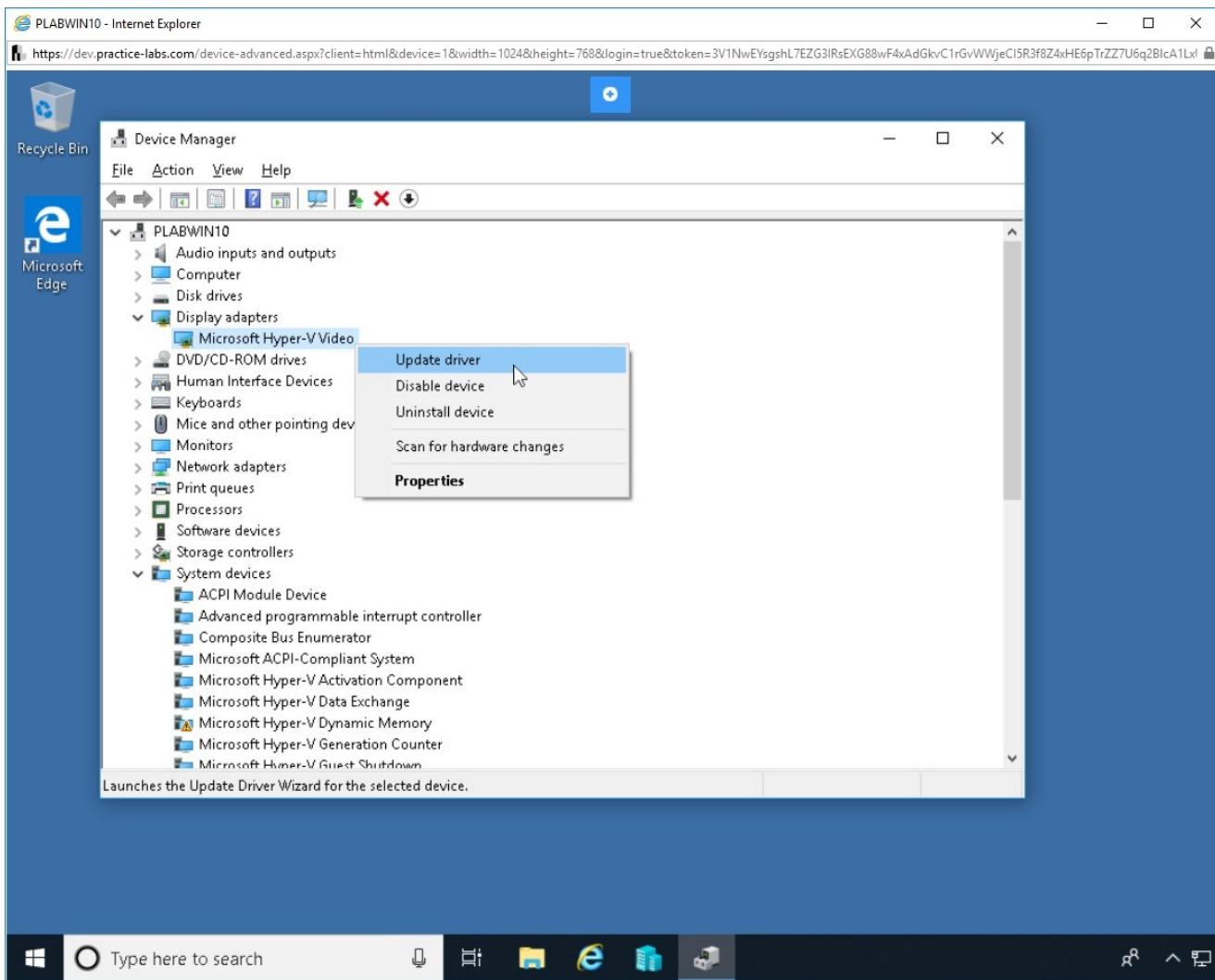


Figure 1.2 Screenshot of device PLABWIN10: Screen shows the update drive option for the Monitors option

## Step 3

The **Update Drivers - Microsoft Hyper-V Video** dialog box is displayed.

Click **Search automatically for updated driver software**.

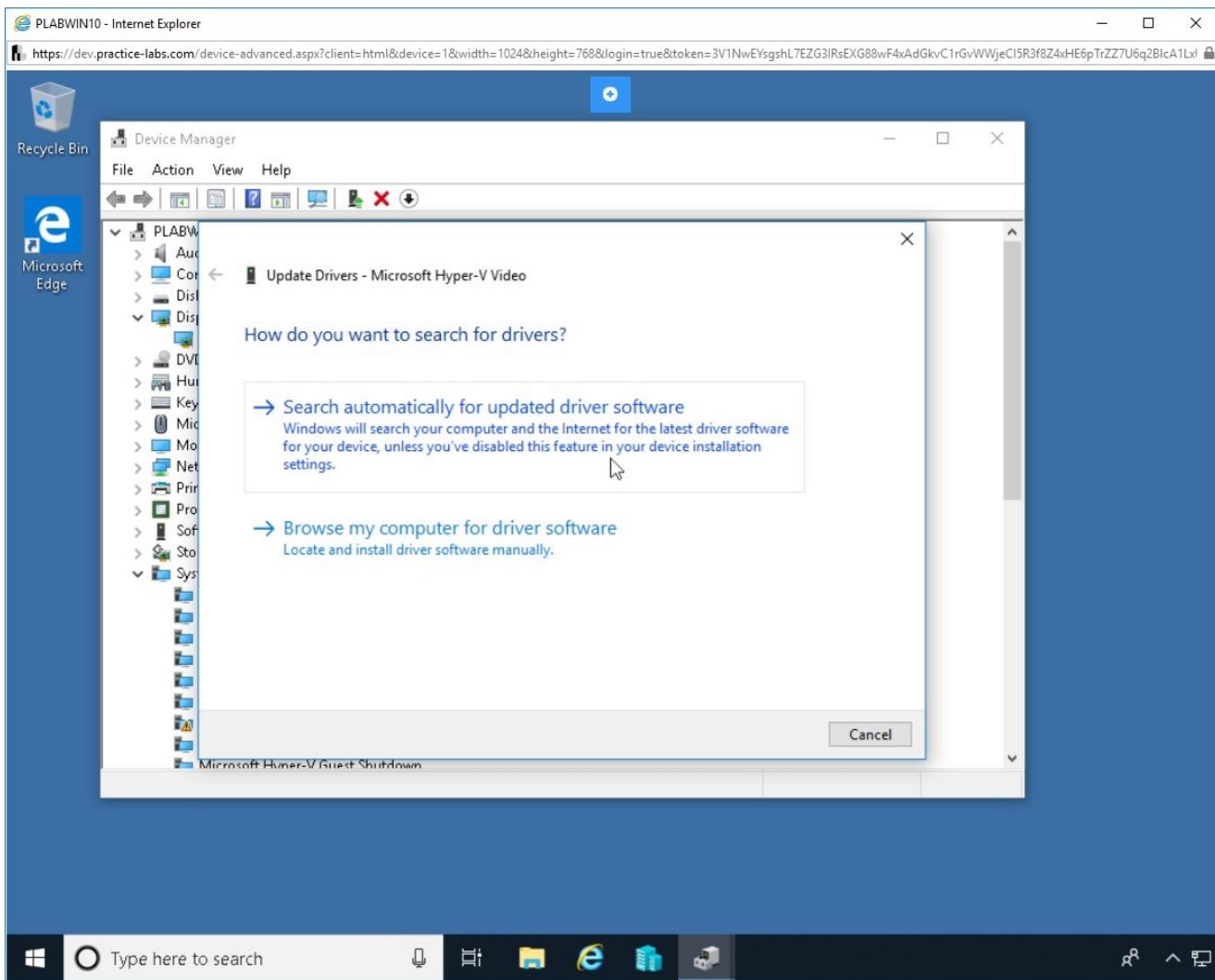


Figure 1.3 Screenshot of device PLABWIN10: Screen shows search options for finding the available updates

## Step 4

Windows performs a search operation. Notice that the dialog box states that the best drivers are already installed.

This means that the display adapter is already running the latest set of device drivers.

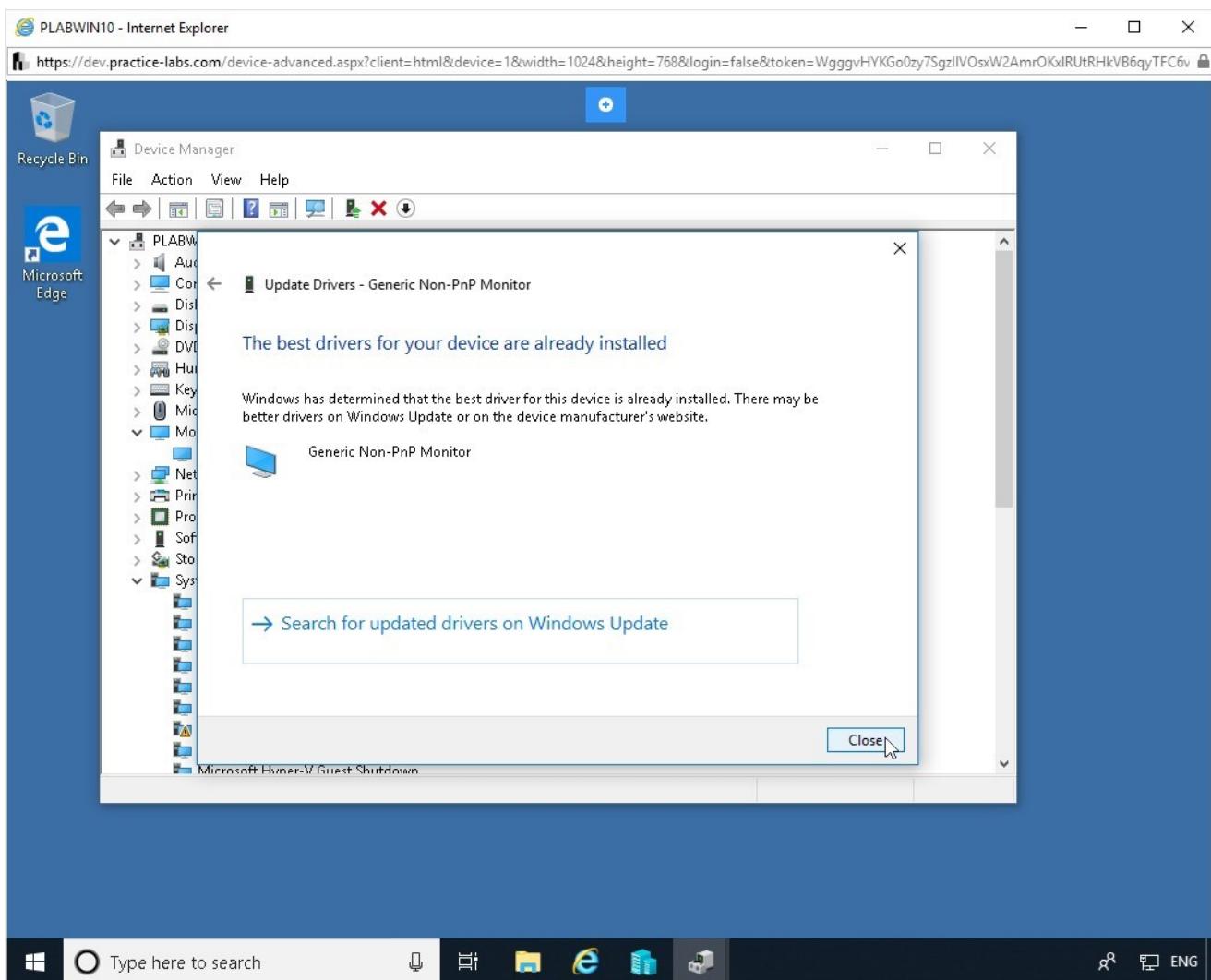


Figure 1.4 Screenshot of device PLABWIN10: Screen shows the message about the monitor driver

## Step 5

Click **Close**.

**Close Device Manager.**

**Note:** Alternatively, you can click *Search for update drivers on Windows Update*. It will open the Windows Update window and then you can run Windows Update.

Leave the devices you have powered on in their current state and proceed to the next exercise.

# Exercise 2 - Configuring Settings

Windows operating system contains some general information. This information is related to a few useful things, such as:

- Time
- Date
- Region
- Language

A user often finds this information necessary while using a computer system. It is possible to set date, time, and choose the region and the language. We will now see some of these settings.

## Learning Outcomes

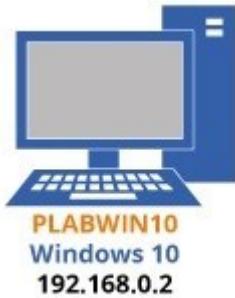
After completing this exercise, you will be able to:

- Configure time/date/region/language settings

## Your Devices

You will be using the following device in this lab. Please power these on now.

- **PLABWIN10** - (Windows 10 - Domain Member)



## Task 1 - Configure Time/Date/Region/Language Settings

You need to configure date and time, region, and language settings while you are installing Windows 10. You can also change these settings later after Windows is

installed.

In this task, you will be shown how to configure these settings.

## Step 1

Connect to **PLABWIN10** if already not connected.

In the search box on the taskbar, type the following text:

Date and time settings

Select **Date & Time settings** from the search results.

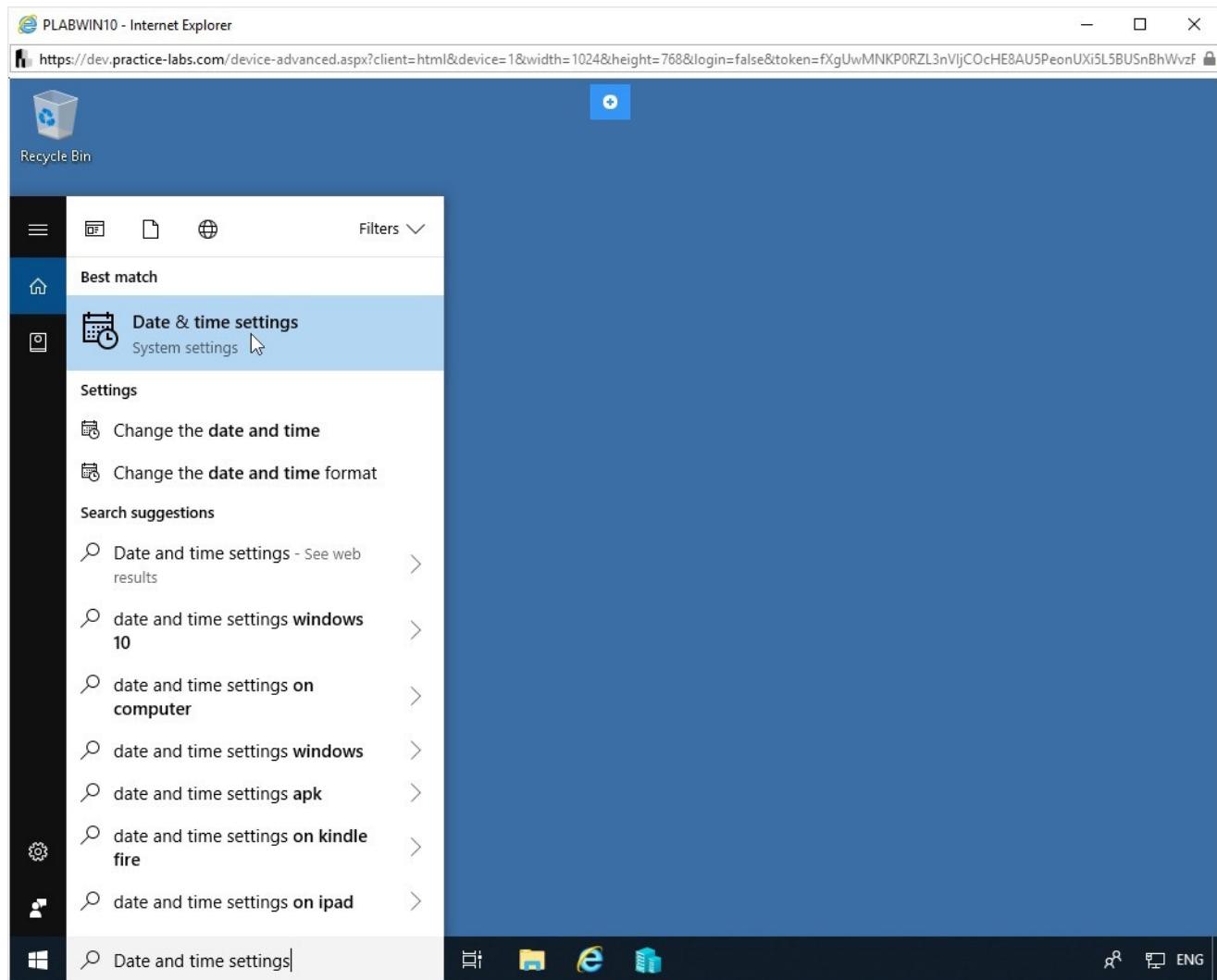


Figure 2.1 Screenshot of device PLABWIN10: Screen shows how to reach date and time settings

## Step 2

The **Settings** dialog box is displayed.

Notice that the right pane displays the **Date & time** page.

Scroll down and select the **Additional date, time, and regional settings** link.

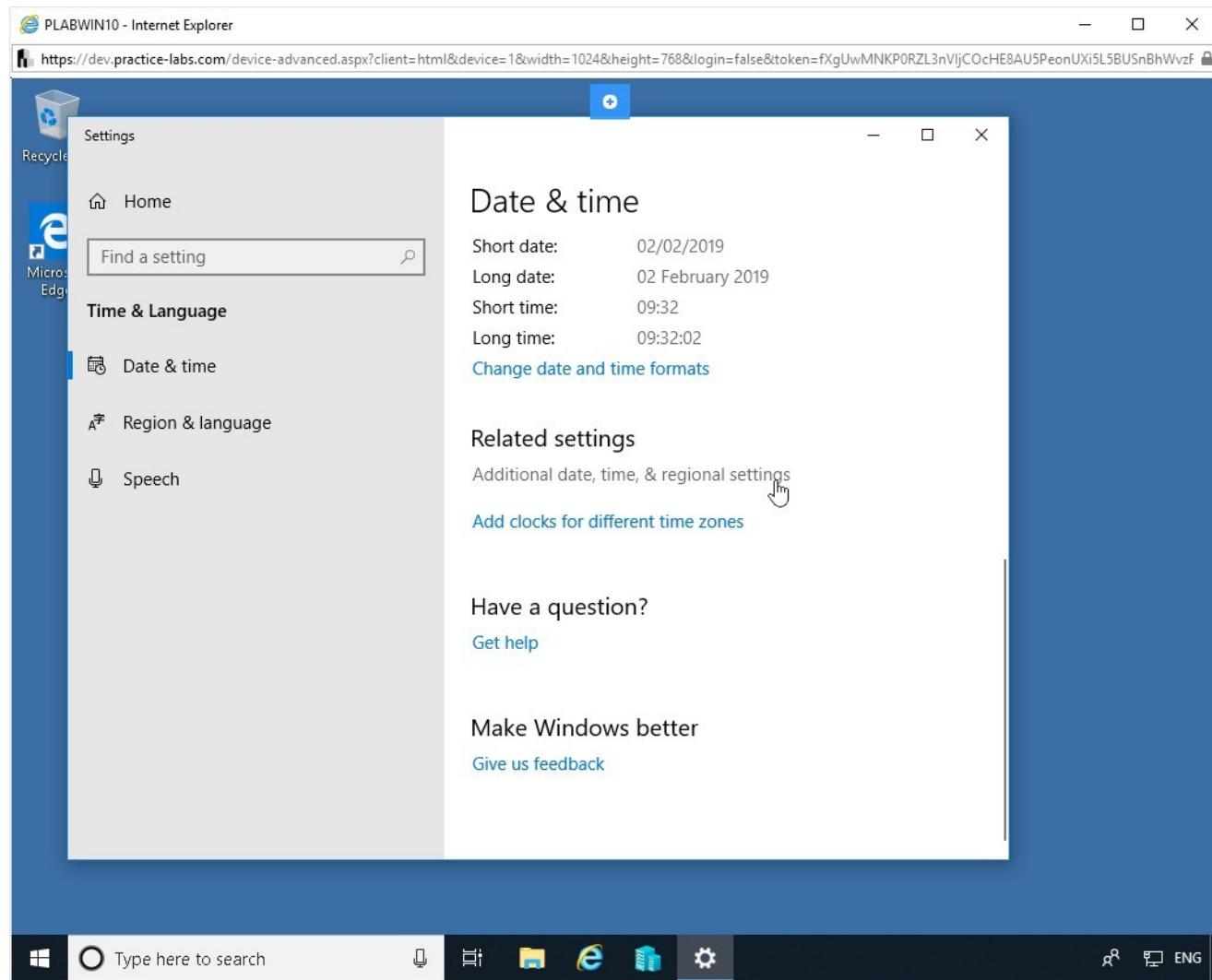


Figure 2.2 Screenshot of device PLABWIN10: Screen shows the link to open for date, time, and regional settings

## Step 3

The **Clock and Region** dialog box is displayed.

Select the **Set the time and date** link in the **Date and Time** section.

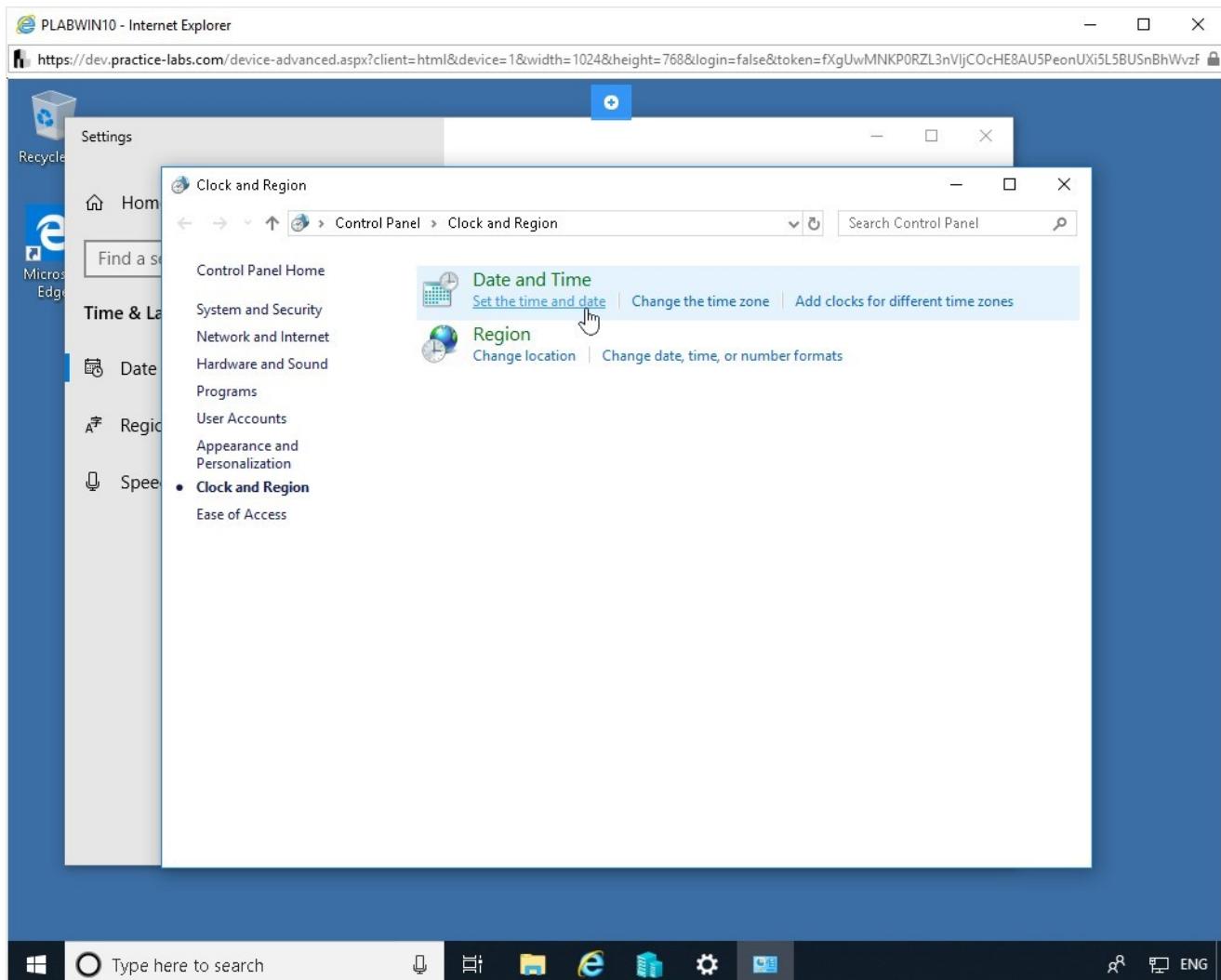


Figure 2.3 Screenshot of device PLABWIN10: Screen shows the link to open date and time-related settings.

## Step 4

The **Date and Time** dialog box is displayed.

Click **Change date and time...**

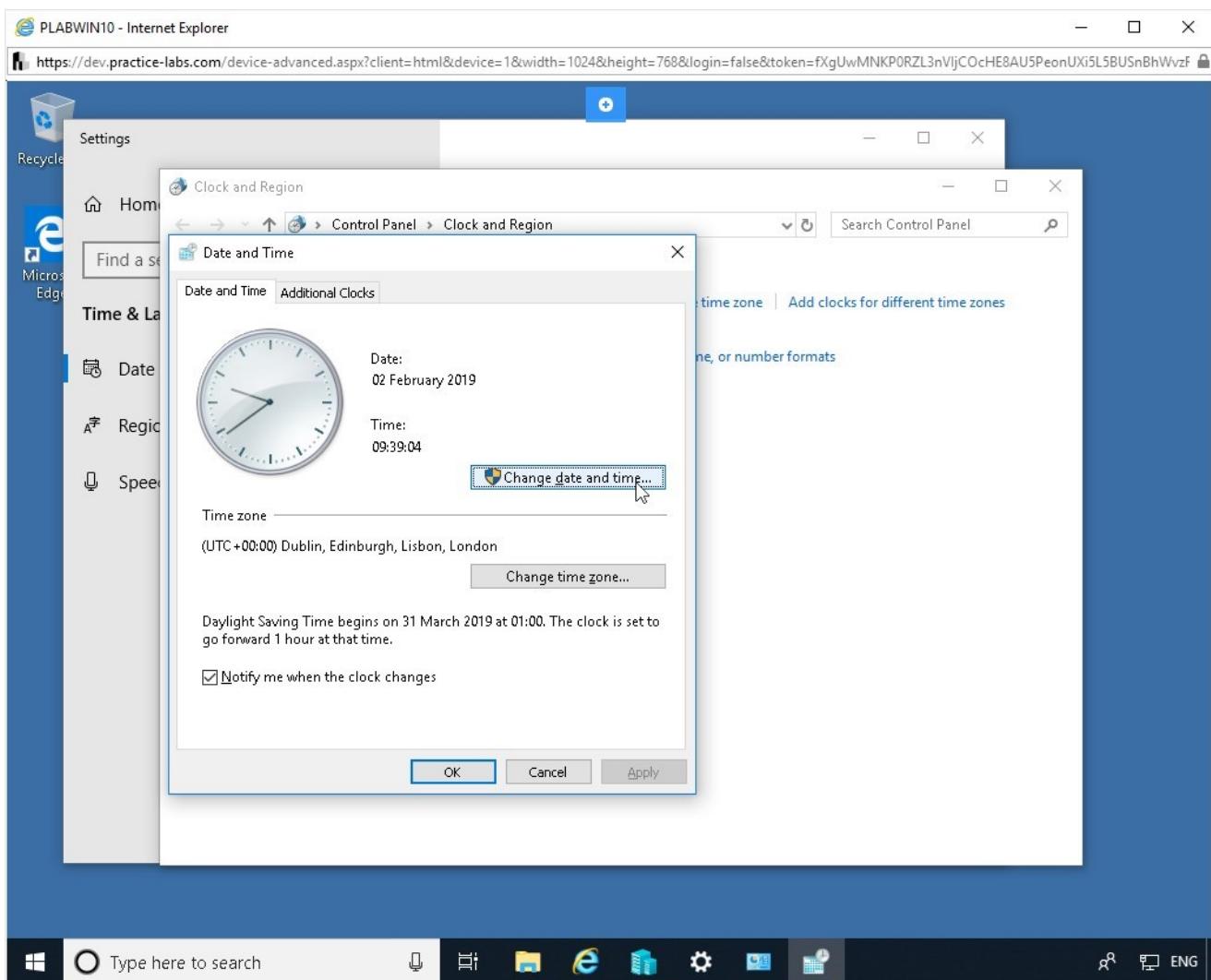


Figure 2.4 Screenshot of device PLABWIN10: Screen shows the button to click to reach window containing functionality to change the date and time settings

## Step 5

The **Date and Time Settings** dialog box is displayed. You can change the date and time here.

Click **Cancel** to close the **Date and Time Settings** dialog box.

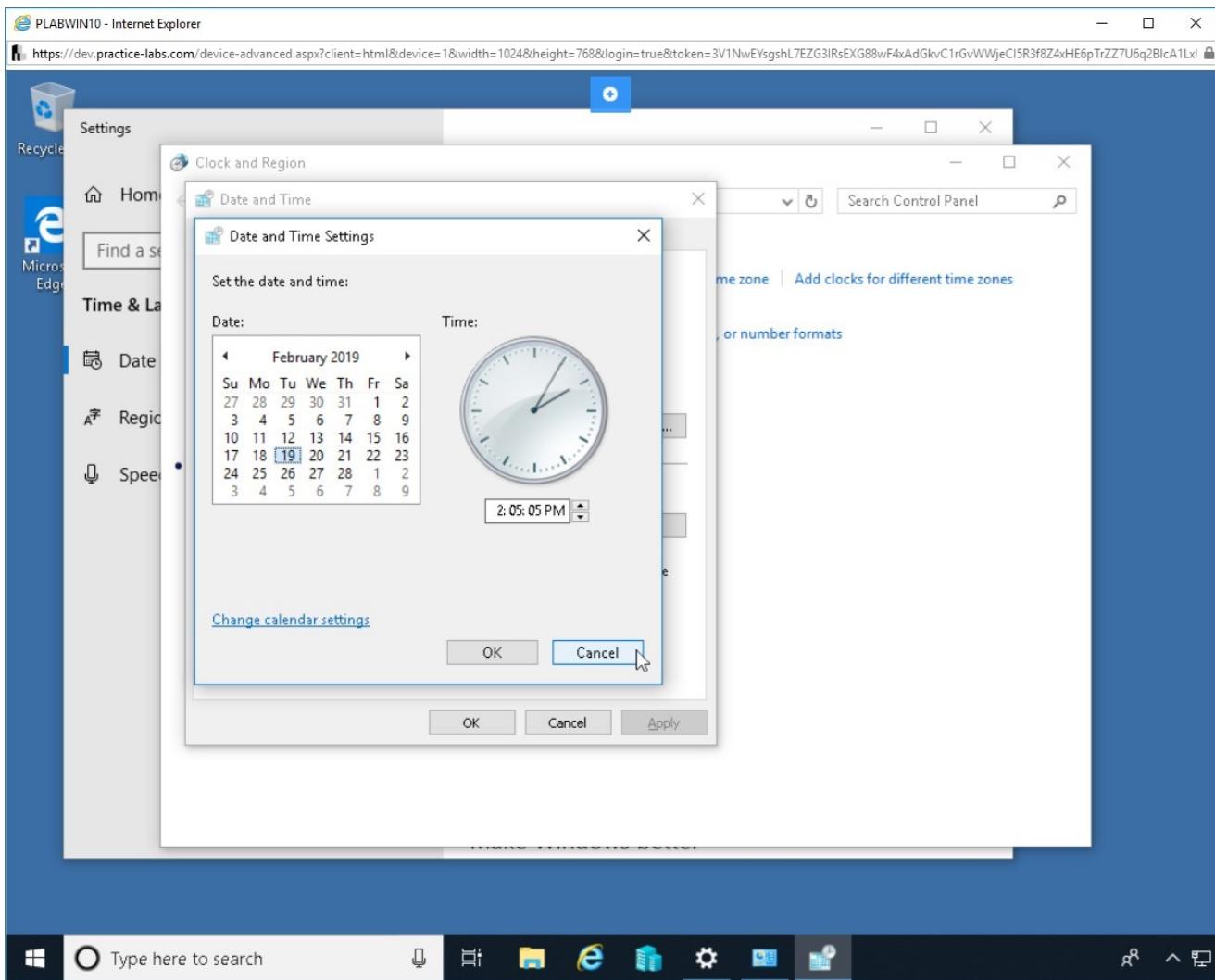


Figure 2.5 Screenshot of device PLABWIN10: Screen shows the functionality for changing the date and time in windows.

## Step 6

You are back on the **Date and Time** dialog box. Click **Cancel**.

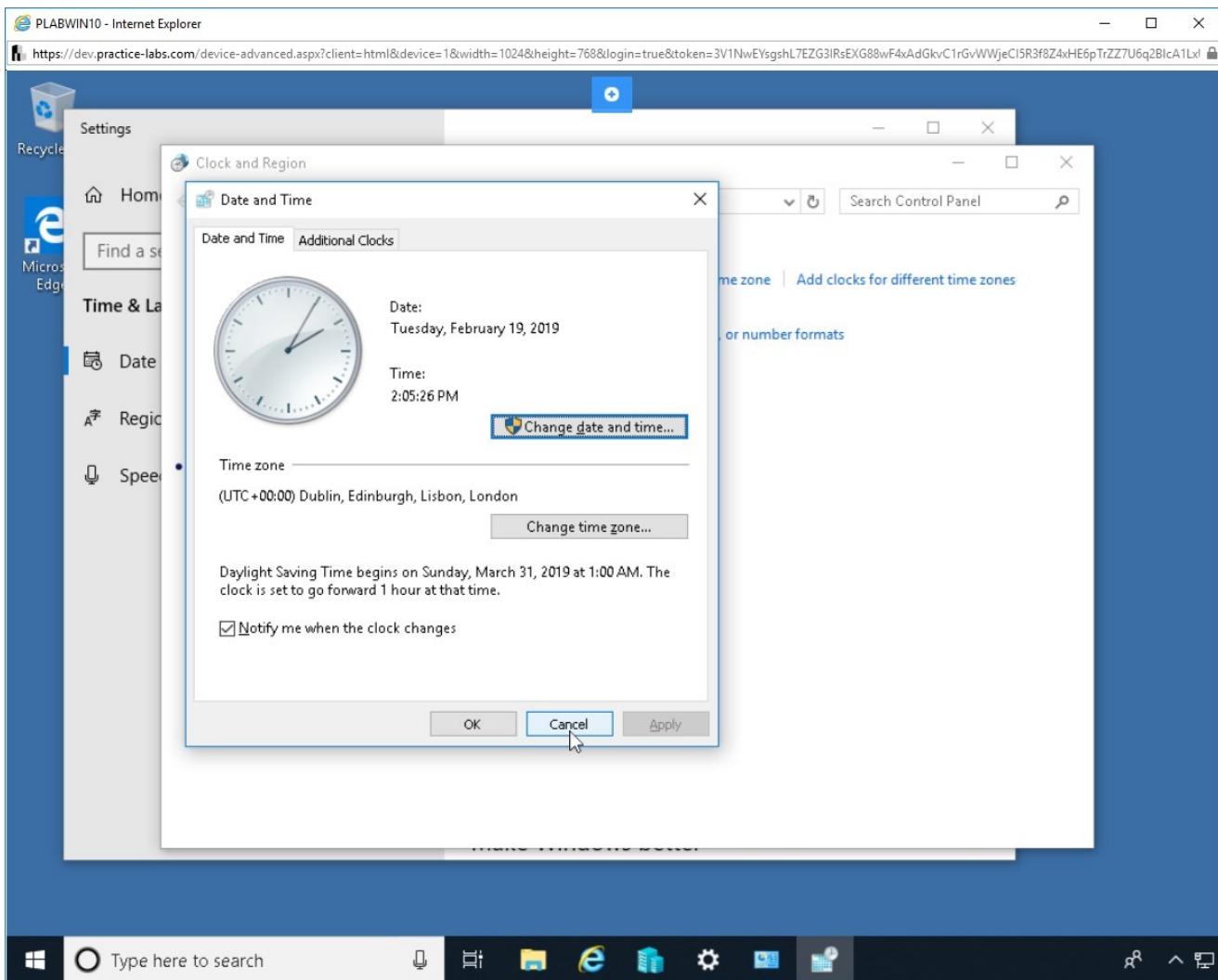


Figure 2.6 Screenshot of device PLABWIN10: Screen shows the functionality for changing the date and time in windows.

## Step 7

You are back on the **Clock and Region** window.

Click the **Change location** link in the **Region** section.

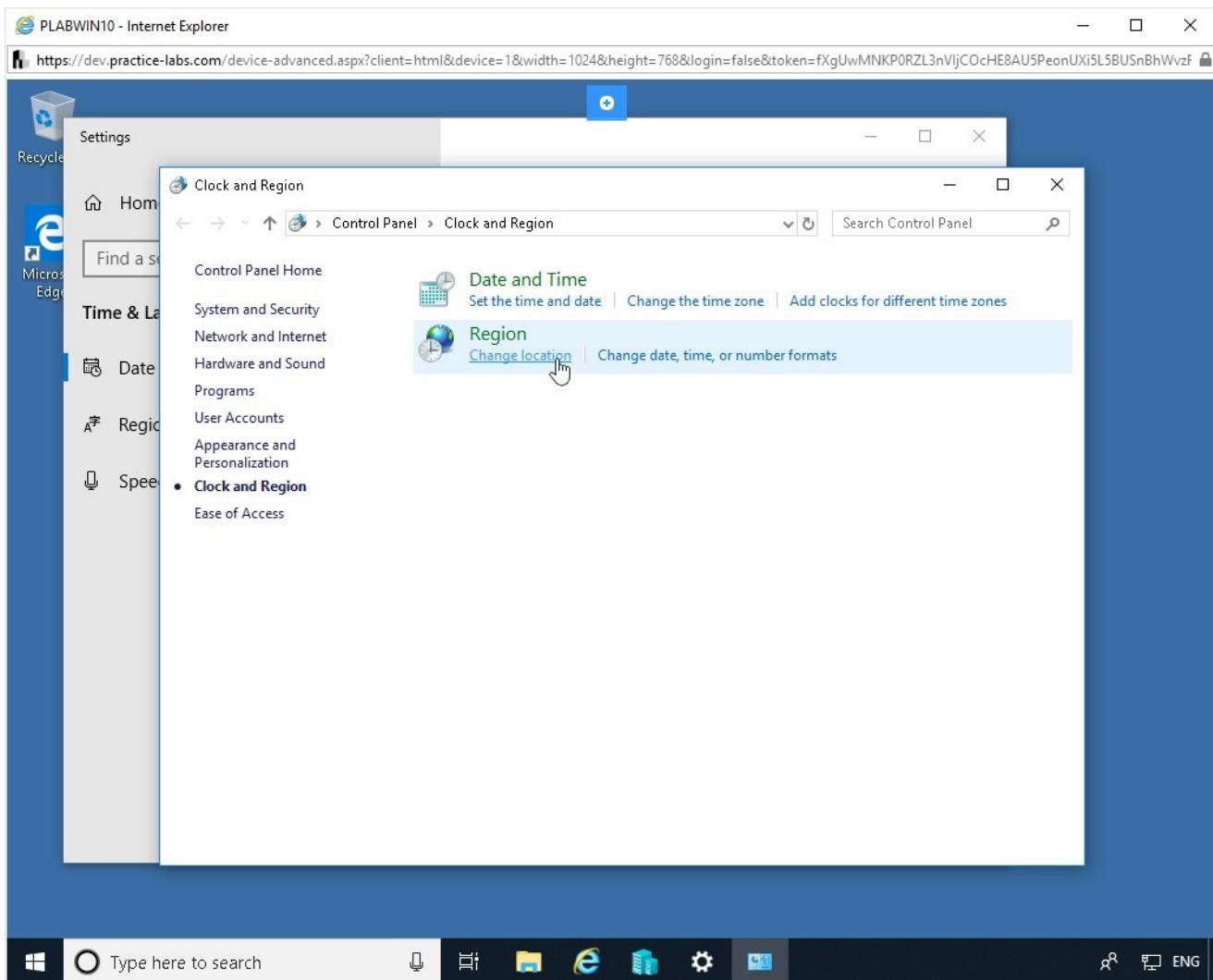


Figure 2.7 Screenshot of device PLABWIN10: Screen shows the link to access the region related options

## Step 8

The **Region** dialog box is displayed.

From the **Home location** drop-down, select **United Kingdom**. Click **OK**.

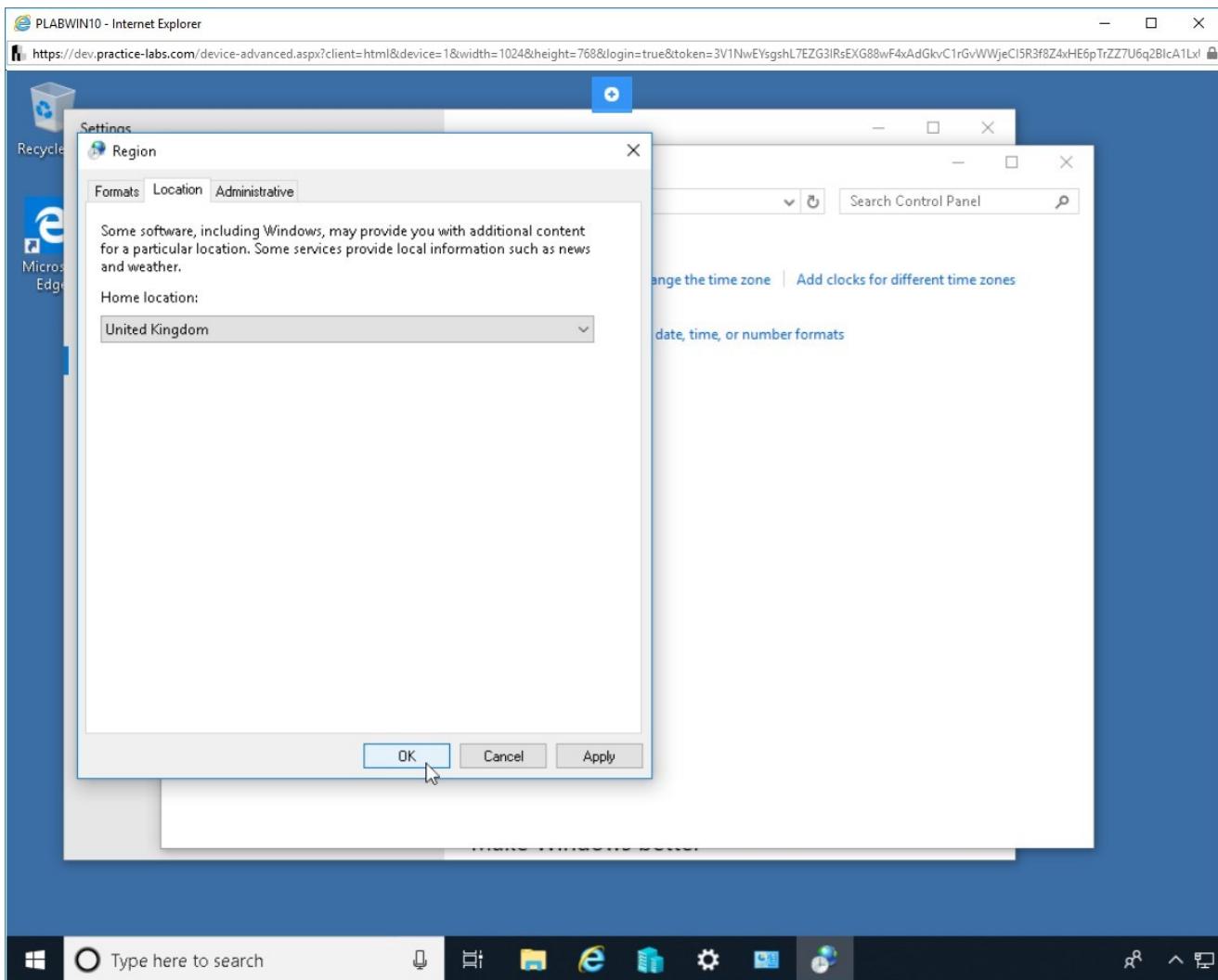


Figure 2.8 Screenshot of device PLABWIN10: Screen shows the drop-down list of options for regions

## Step 9

You are back on the **Clock and Region** window.

**Close** this window.

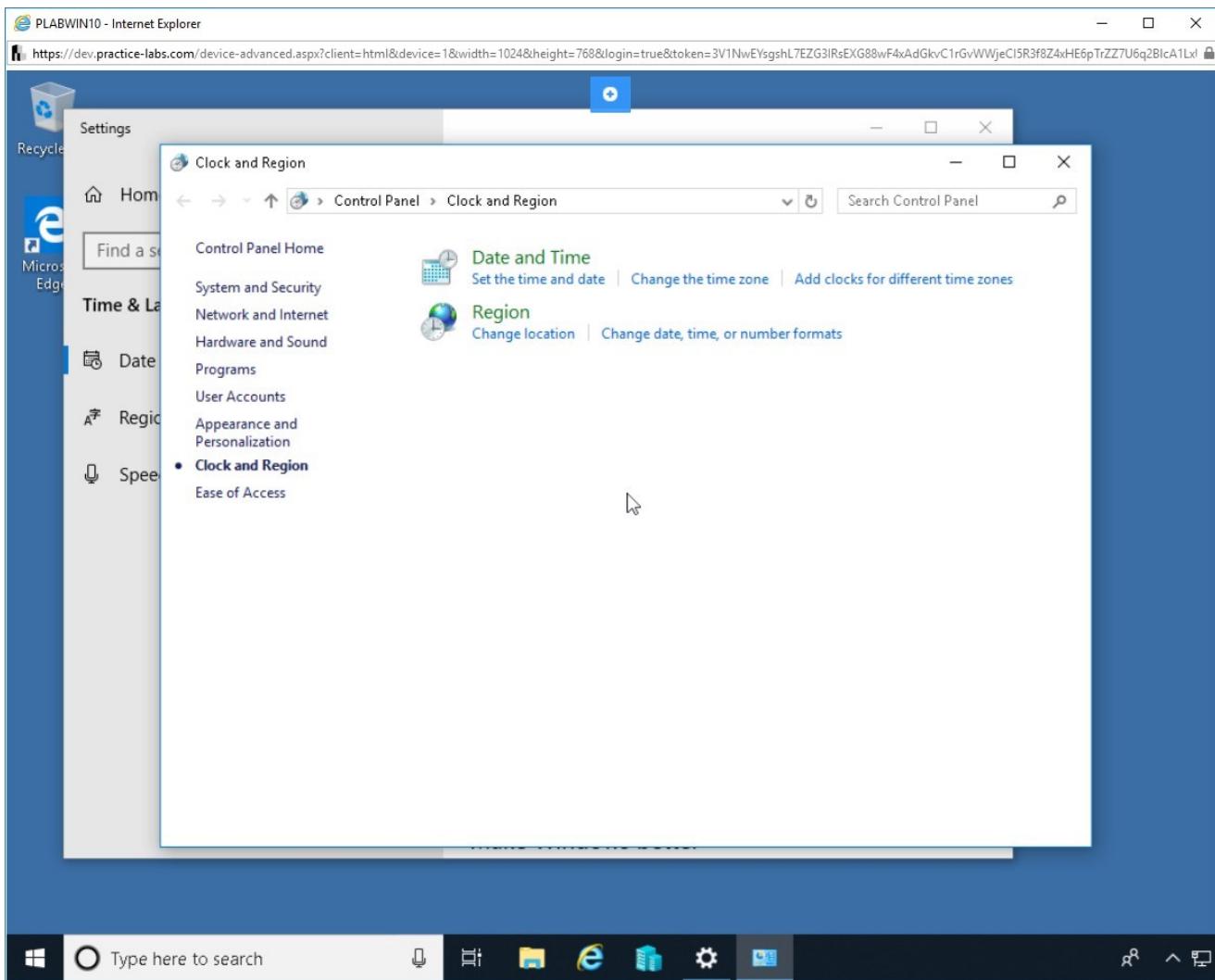


Figure 2.9 Screenshot of device PLABWIN10: Screen shows the drop-down list of options for regions

## Step 10

You are now back on the **Settings** window.

From the left pane, click **Region & language**.

A couple of error messages will appear. Click **OK** on those error messages.

## Step 11

In the **Country or region** section, click the **Country or region** drop-down and select the **United States**.

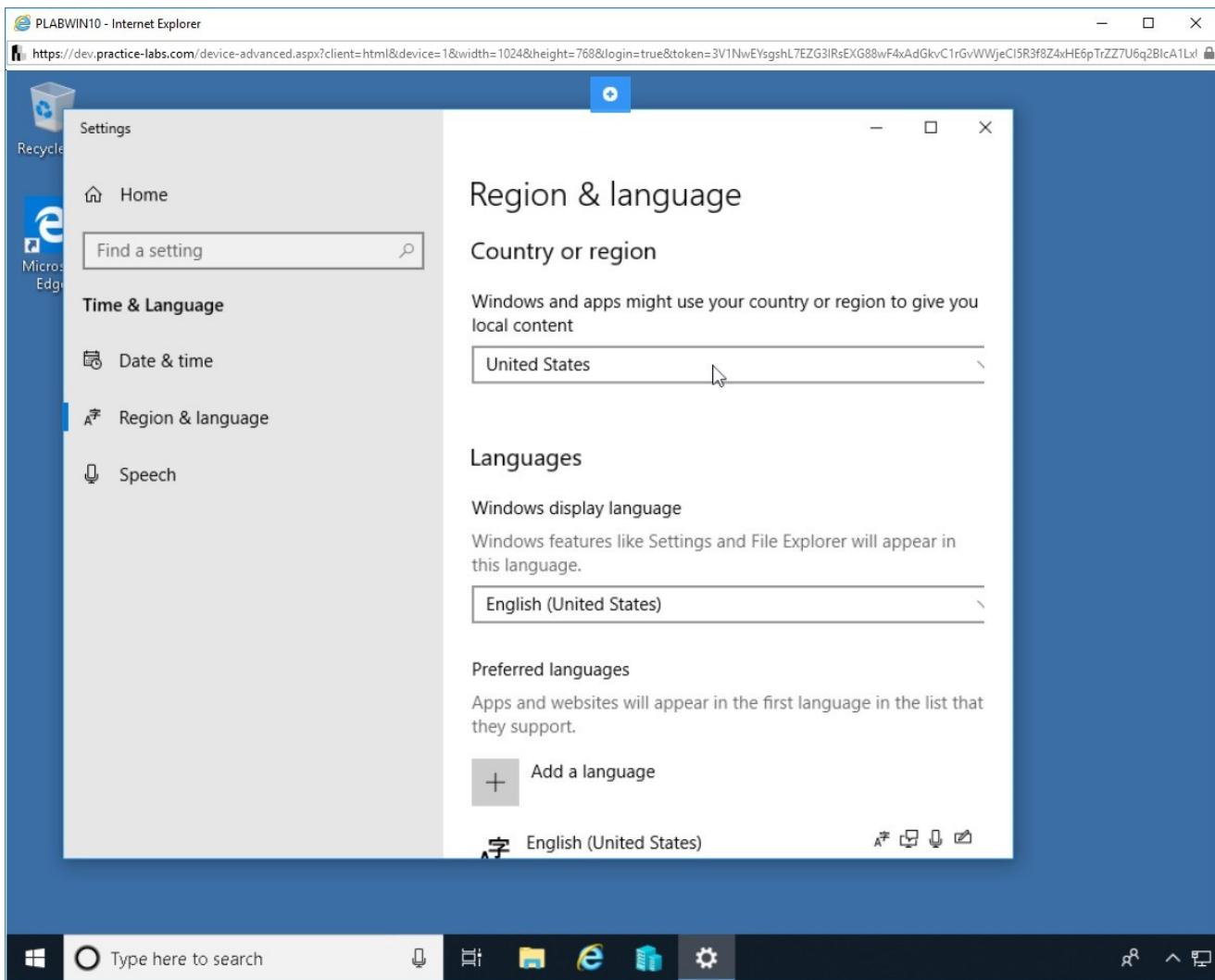


Figure 2.11 Screenshot of device PLABWIN10: Screen shows the drop-down list of options for language related settings

Close the **Settings** window.

Leave the devices you have powered on in their current state and proceed to the next exercise.

## Exercise 3 - Performing Windows Refresh

Most of the modern-day machines have pre-installed Windows in a partition of the hard drive, which is called a factory recovery partition. This partition contains the original image of the operating system and applications that were installed in the system at the

time of shipment. Using the system image in the factory recovery partition, a user can bring the system back to the state it was in at the time of purchase.

In this exercise, you will learn to use the factory recovery partition.

## Learning Outcomes

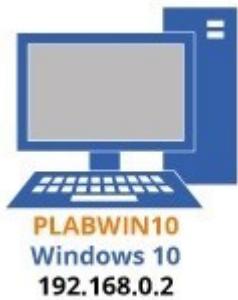
After completing this exercise, you will be able to:

- Perform Windows Refresh

## Your Devices

You will be using the following device in this lab. Please power these on now.

- **PLABWIN10** - (Windows 10 - Domain Member)



## Task 1 - Performing a Windows Refresh

In case of a system crash, it is difficult to re-install the operating system and also the applications that were installed at the time of purchase. A user can use the factory refresh to bring the system back to working condition.

However, since it is an image of the original operating system and applications at the time of purchase, refreshing the Windows does not impact the data.

**Alert:** Not all steps in this task are supported in the lab environment. Hence, if you have a laptop or system with Windows 10, you can attempt to perform the full task using your own device. **However, do not forget to backup your data.**

In this task, you will learn to perform Windows refresh.

## Step 1

In the search box on the taskbar, type the following text:

settings

Click **Settings** in the search results.

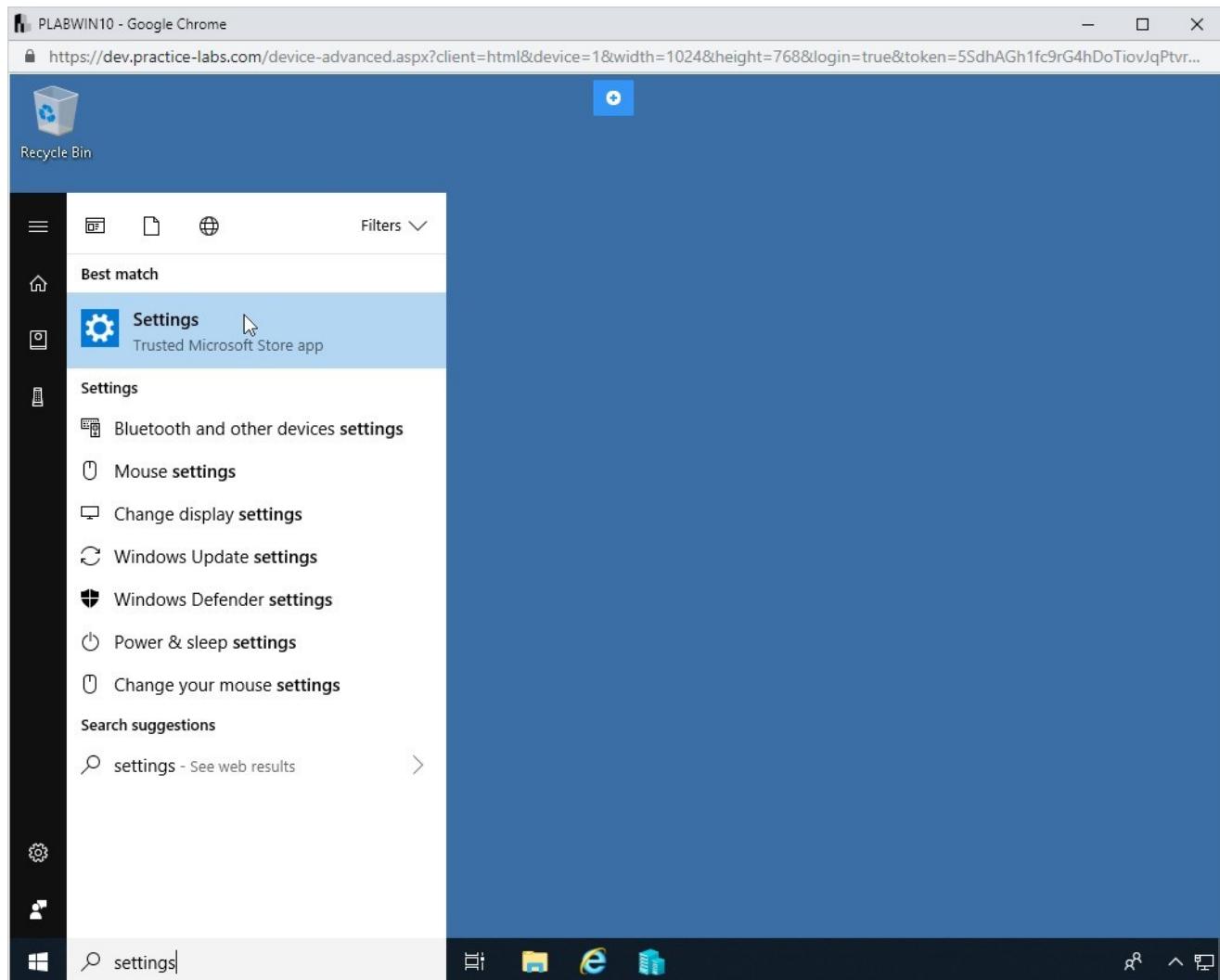


Figure 3.1 Screenshot of device PLABWIN10: Screen shows how to open the Settings

## Step 2

The **Settings** window is displayed.

## Click Update & Security.

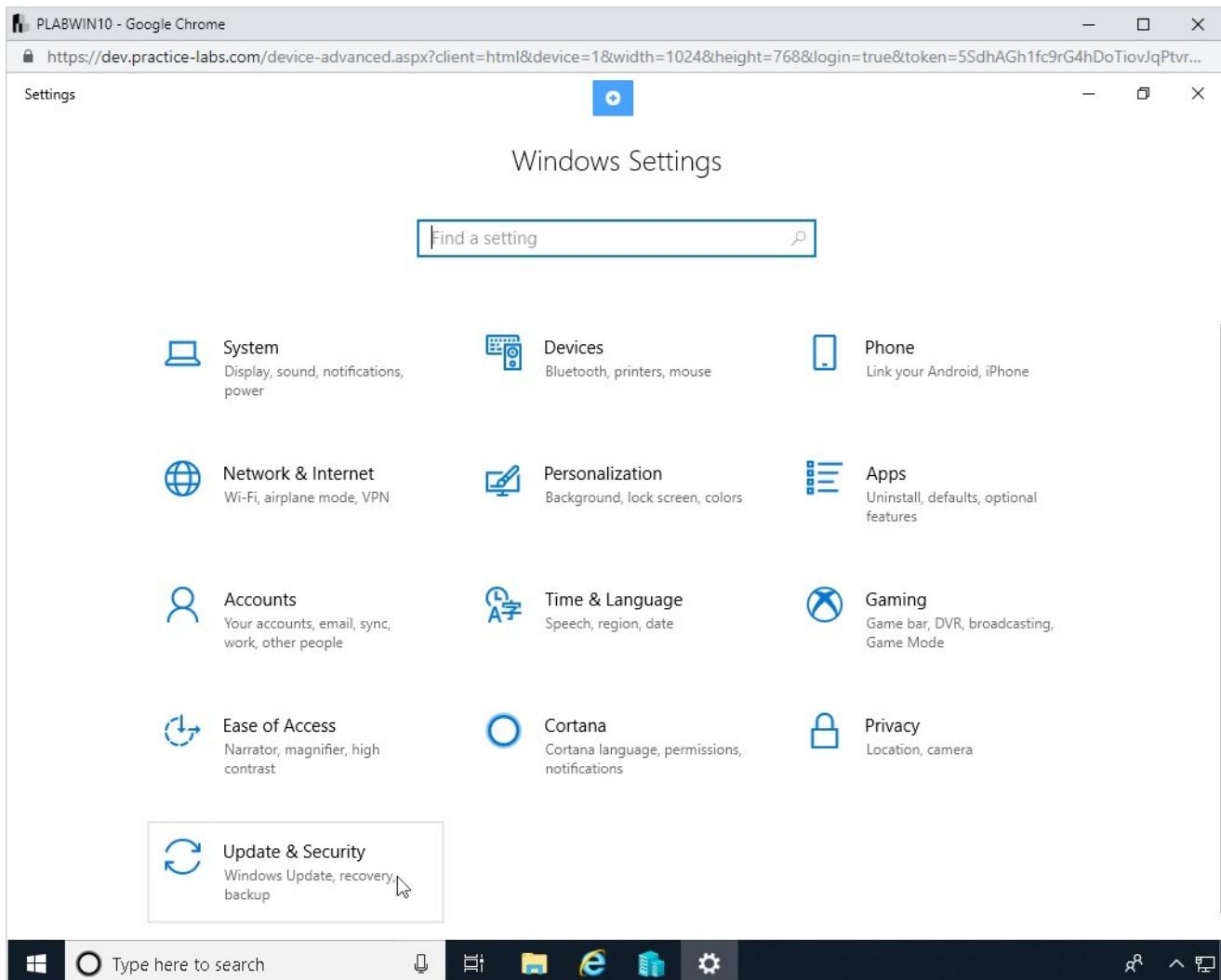


Figure 3.2 Screenshot of device PLABWIN10: Screen shows how to access the update and security settings

## Step 3

The **UPDATES & SECURITY** window is displayed.

In the left pane, select **Recovery**.

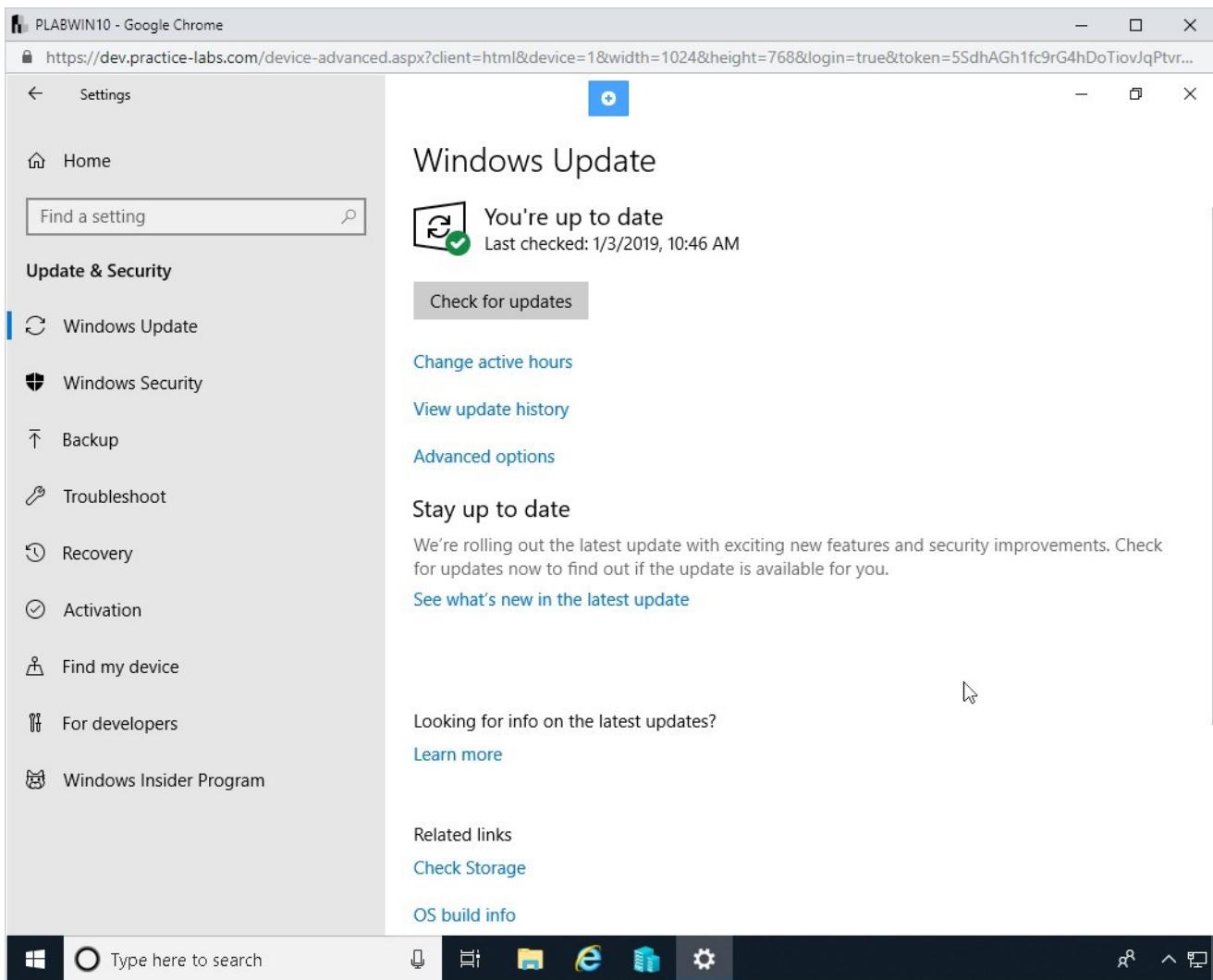


Figure 3.3 Screenshot of device PLABWIN10: Screen shows how to select the Recovery option

## Step 4

The **Reset this PC** page is displayed in the right pane.

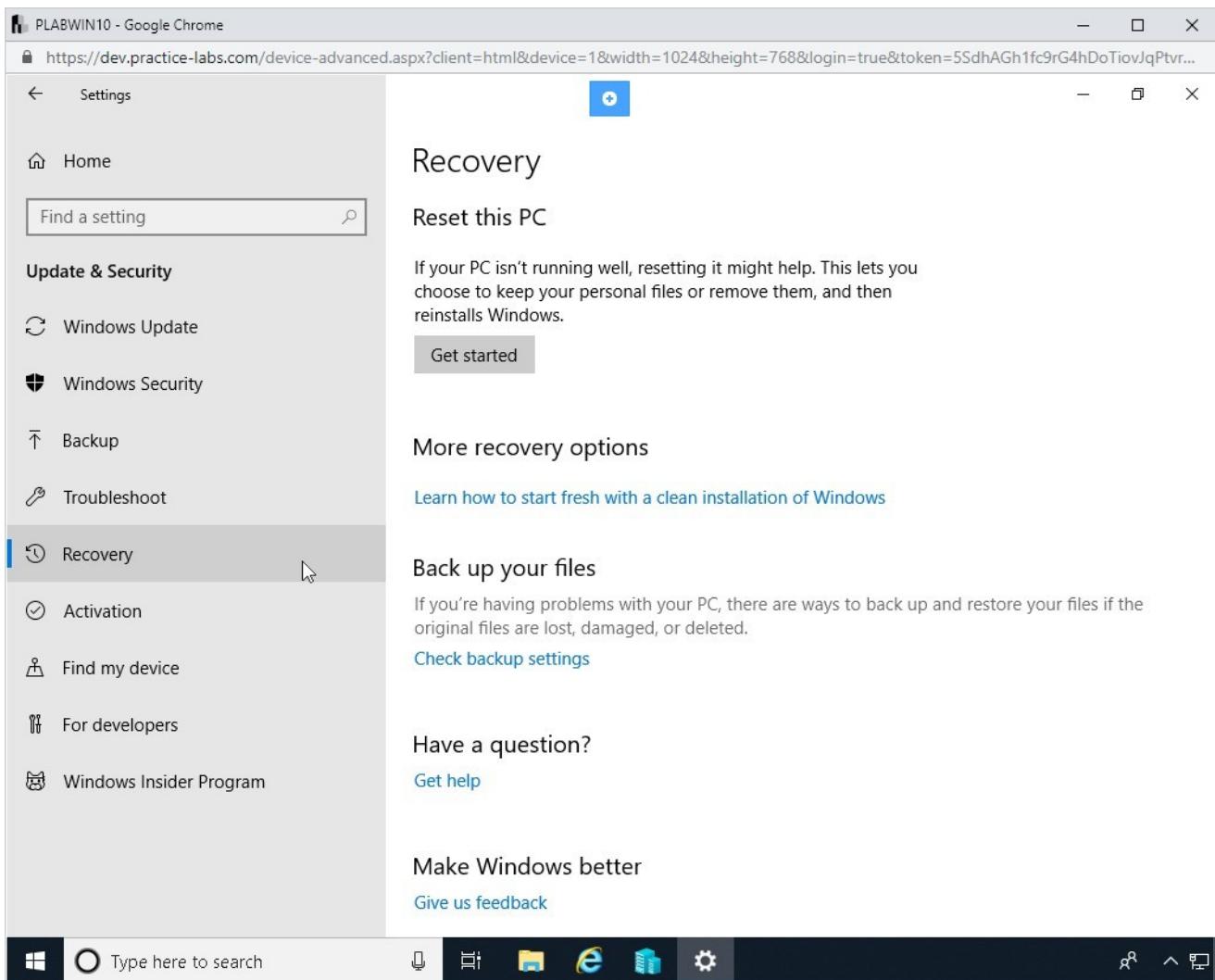


Figure 3.4 Screenshot of device PLABWIN10: Screen shows the Reset this PC section of the Recovery

## Step 5

**Alert:** This step **cannot** be performed in the lab environment due to a technical limitation. The following steps show how to complete the final stages of a **Windows Refresh**. The screenshot below is not taken from the lab environment.

Click **Get started** in **The Reset this PC** section.

The **Choose an option** dialog box is displayed.

Click **Keep my files**.

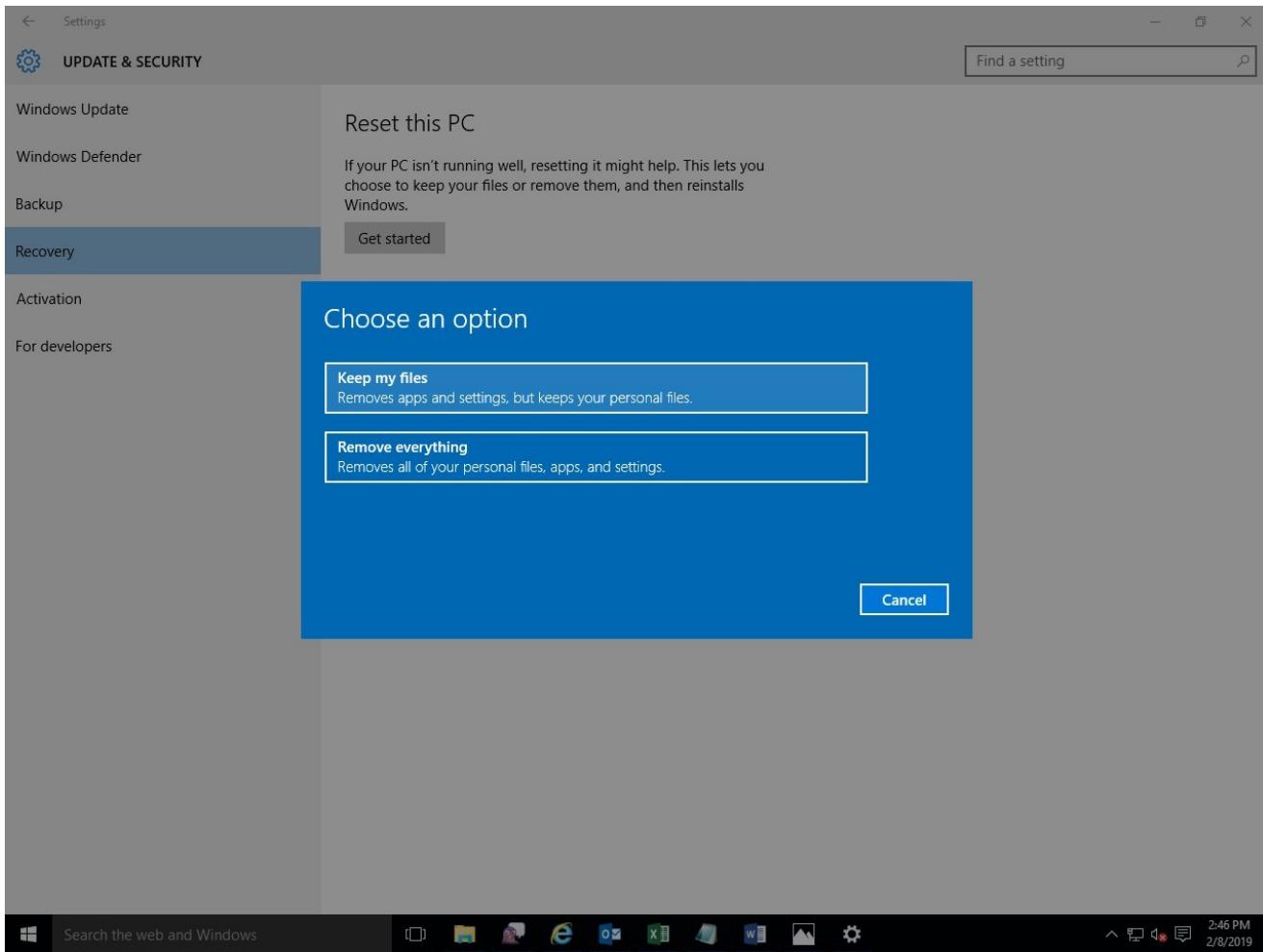


Figure 3.5 Screenshot of device PLABWIN10: Screen shows the available choice of options for recovering a PC

It will start the refresh process. It may take a while to complete.

Leave the devices you have powered on in their current state and proceed to the next exercise.

## Exercise 4 - Preparing a Boot Drive

A boot drive must be a primary partition and must be made active. You cannot boot an operating system from a logical drive. Therefore, when formatting a drive for loading an operating system, ensure that you have formatted it as a primary drive.

## Learning Outcomes

After completing this exercise, you will be able to:

- Prepare a boot drive

## Task 1 - Prepare a Boot Drive

A boot drive is a partition of a storage device wherein operating system files are stored. Following events takes place during the booting process of a computer system:

**Alert:** This cannot be performed inside of the lab due to a technical limitation, below is the stages you would perform to prepare a **Boot Drive**.

1. Once the power button pressed, the computer performs the POST.
2. The BIOS accesses the first sector of the boot disk.
3. The BIOS confirms that there is a boot loader in the first sector.
5. Then, it loads the boot loader in the RAM.
6. The BIOS hands over its work to the boot loader.
7. The boot loader begins loading the operating system into the memory.
8. The operating system takes control of the computer system, and the operating system is ready for user interaction.
9. The boot drive needs to be partitioned correctly. It must have enough space to load all the file of an operating system.

You can format the drive like you normally do and then set it to active. If it is a raw hard drive, when you boot the system with the Windows installation disk, it will prompt to partition the hard drive and the selected partition will be formatted as primary and will be made active automatically.

Leave the devices you have powered on in their current state and proceed to the next exercise.

# Exercise 5 - Ensure Prerequisites/Hardware Compatibility

When installing an operating system, its hardware requirements need to be checked. It must be made sure that the available hardware setup will adequately support the operating system.

In case, hardware requirements are not met, the operating system installation procedure can terminate abruptly, or if it succeeds with the installation, it may not work with optimal performance. You should also know about the hardware compatibility list (HCL) that lists the hardware compatible with Windows.

You can know more about HCL from the following link:

<https://docs.microsoft.com/en-us/windows-hardware/design/compatibility/>

## Learning Outcomes

After completing this exercise, you will be able to:

- Know about prerequisites/hardware compatibility

## Your Devices

You will be using the following device in this lab. Please power these on now.

- **PLABWIN10** - (Windows 10 - Domain Member)



# Task 1 - Knowing about Prerequisites/Hardware Compatibility

In this task, you will find out about Windows 10 hardware pre-requisites.

## Step 1

Ensure you are connected to **PLABWIN10** and **close** any open windows.

Click **Internet Explorer** on the taskbar.

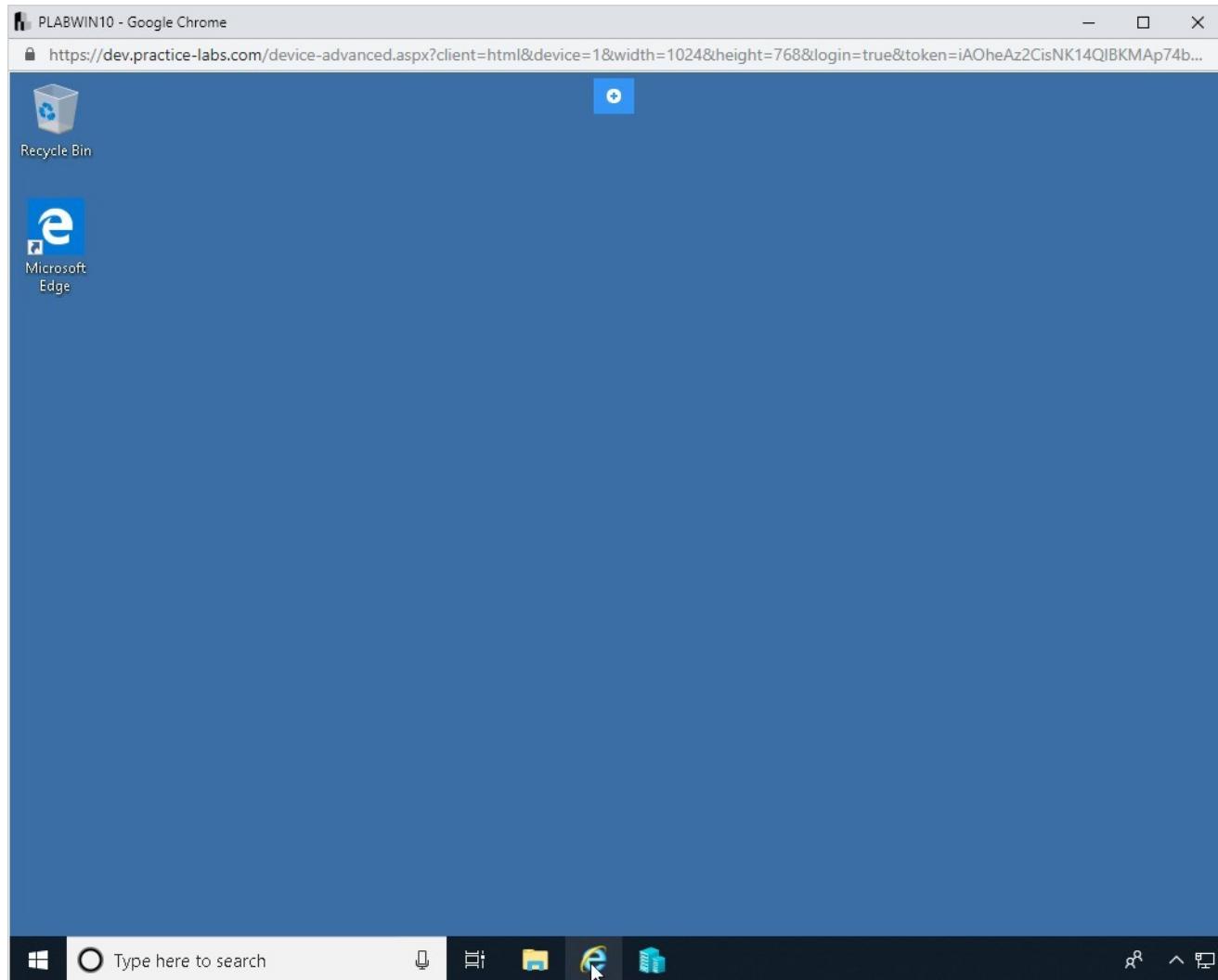


Figure 5.1 Screenshot of device PLABWIN10: Screen shows how to open the internet explorer

## Step 2

In the Internet Explorer search textbox, next to address bar, type the following:

## WIN 10 REQUIREMENTS

Click on the **Search** icon. Alternatively, press **Enter**.

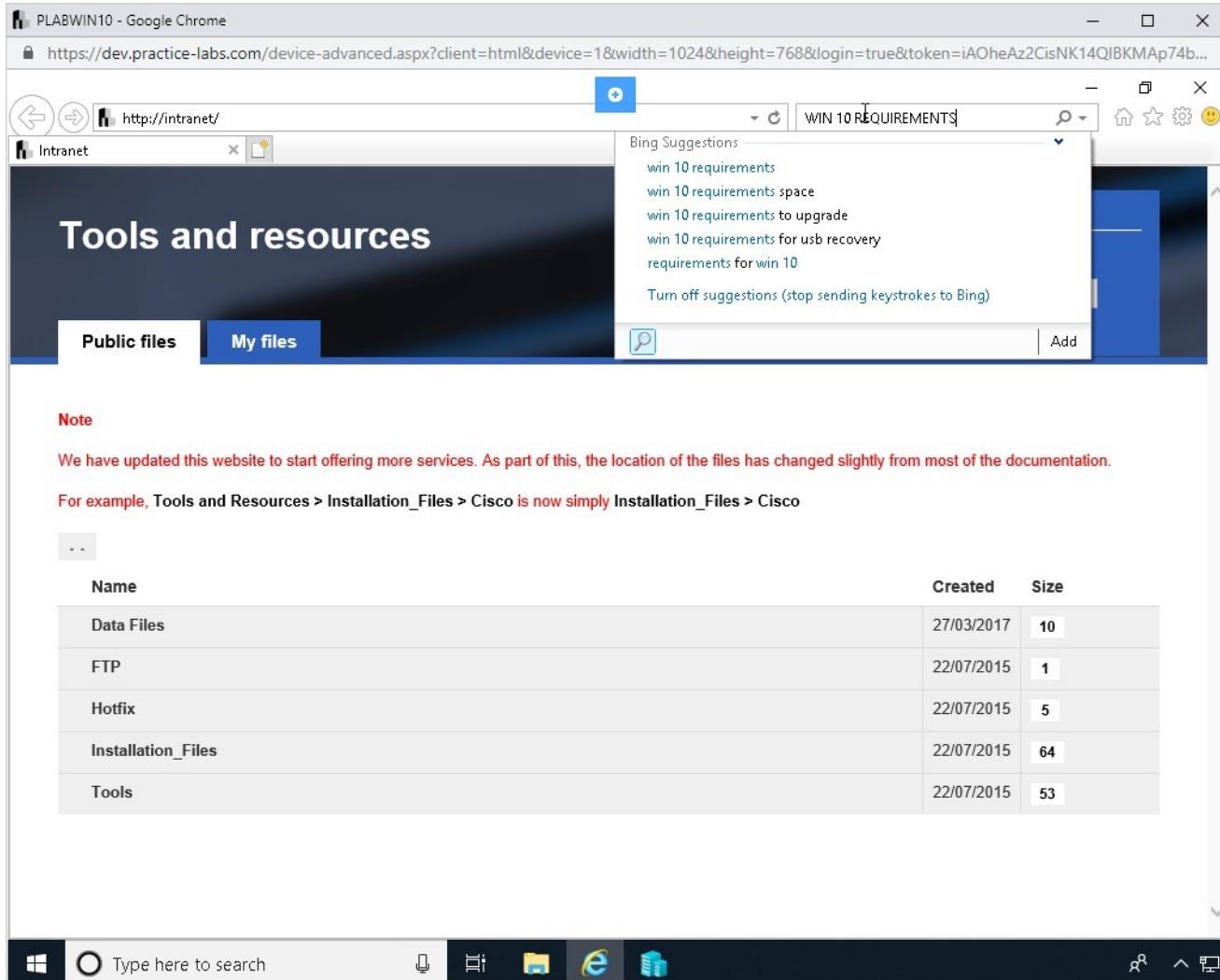


Figure 5.2 Screenshot of device PLABWIN10: Screen shows how to perform search in the internet explorer

## Step 3

Press **Accept** to the popup notice.

Scroll down until the requirements displayed in the search result are visible.

Observe that the following hardware requirements are listed along with a few others:

- RAM size
- Processor speed
- Hard disk space

Finally, close **Internet Explorer**.

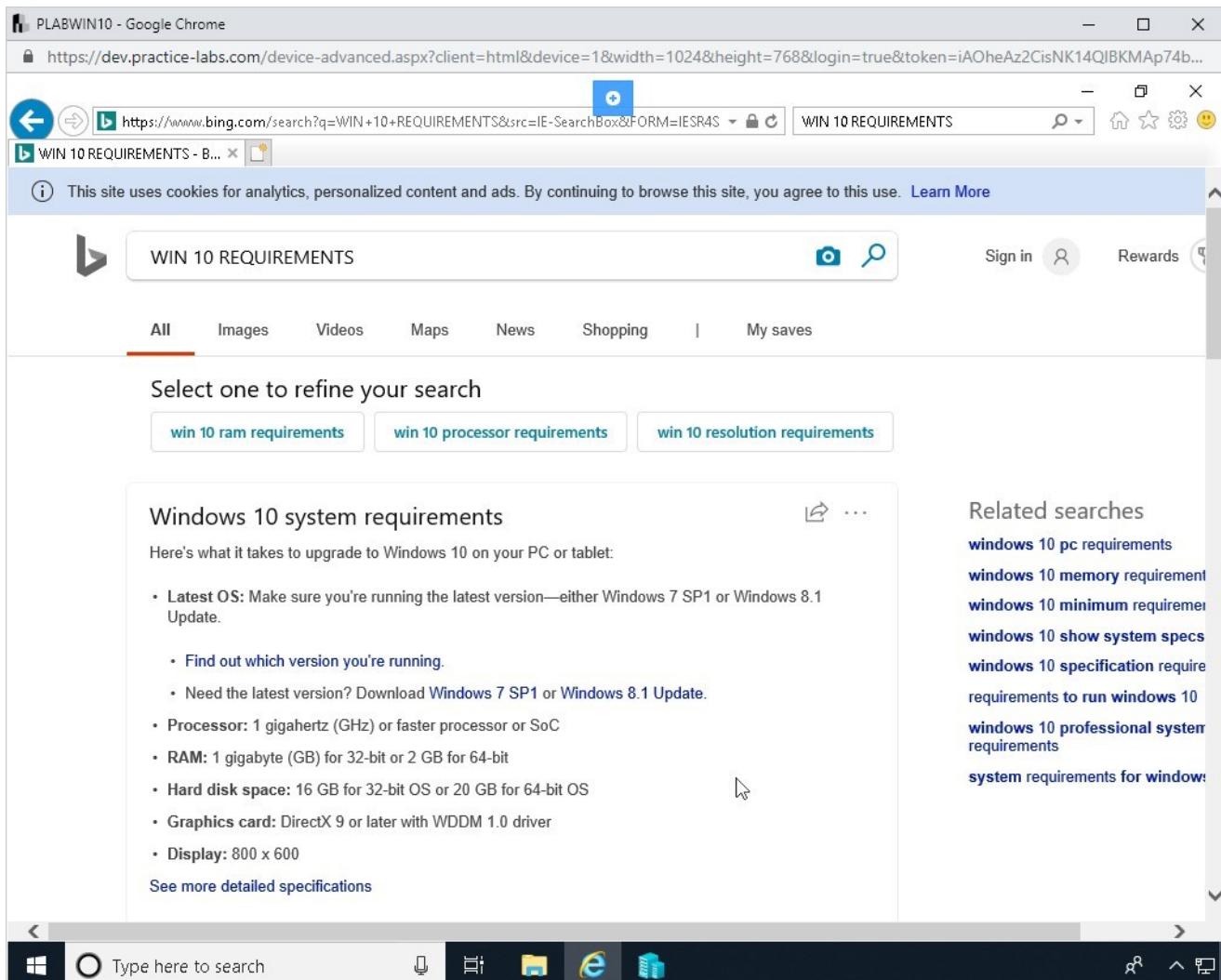


Figure 5.3 Screenshot of device PLABWIN10: Screen shows the result of a search operation

## Step 4

You will now check the system hardware and software configuration of **PLABWIN10**.

Right click the Windows **Start** charm and select **System**.

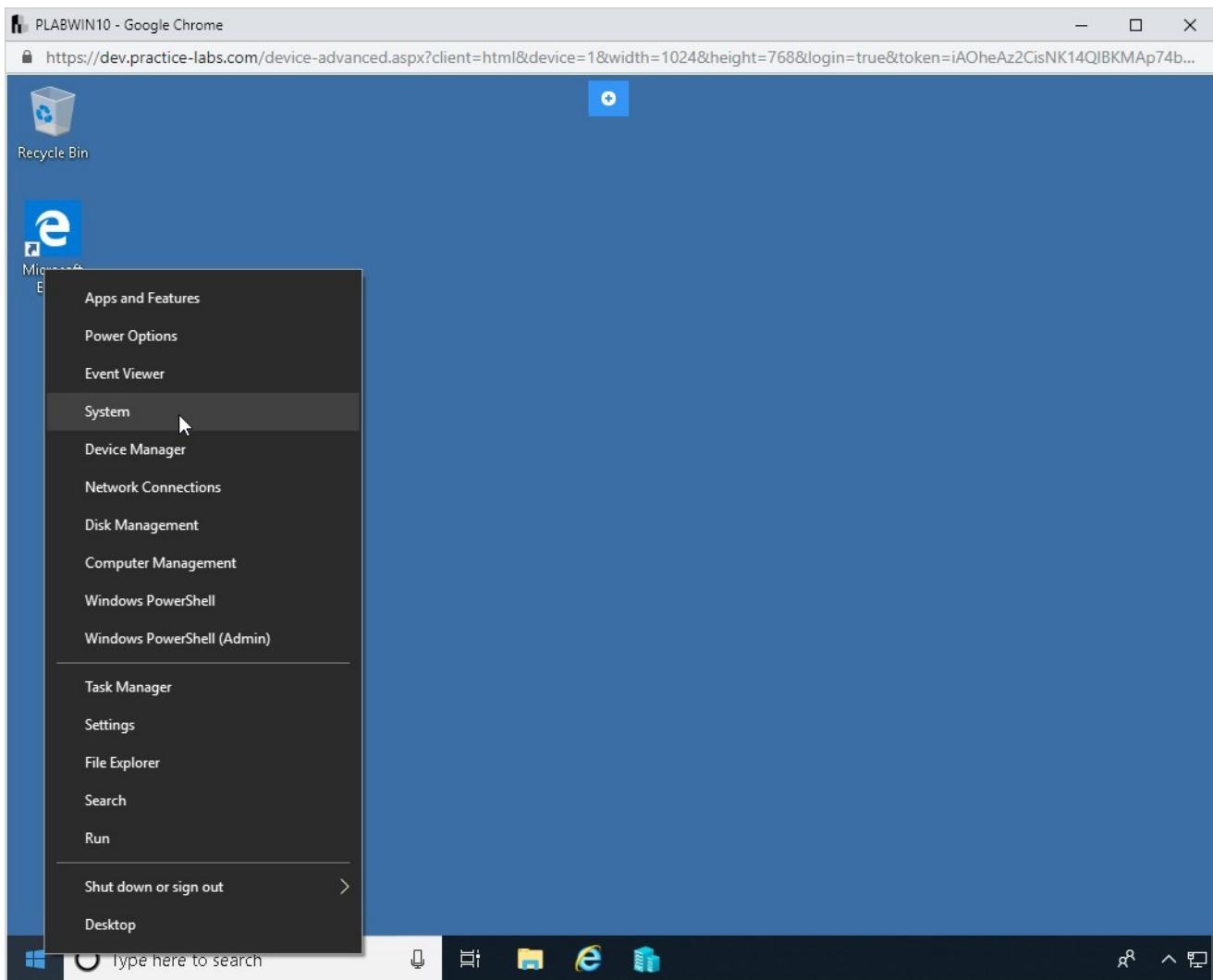


Figure 5.4 Screenshot of device PLABWIN10: Screen shows how to open the system information

## Step 5

The **System** window is displayed.

Observe the panel. It has the hardware and software related information of the system.

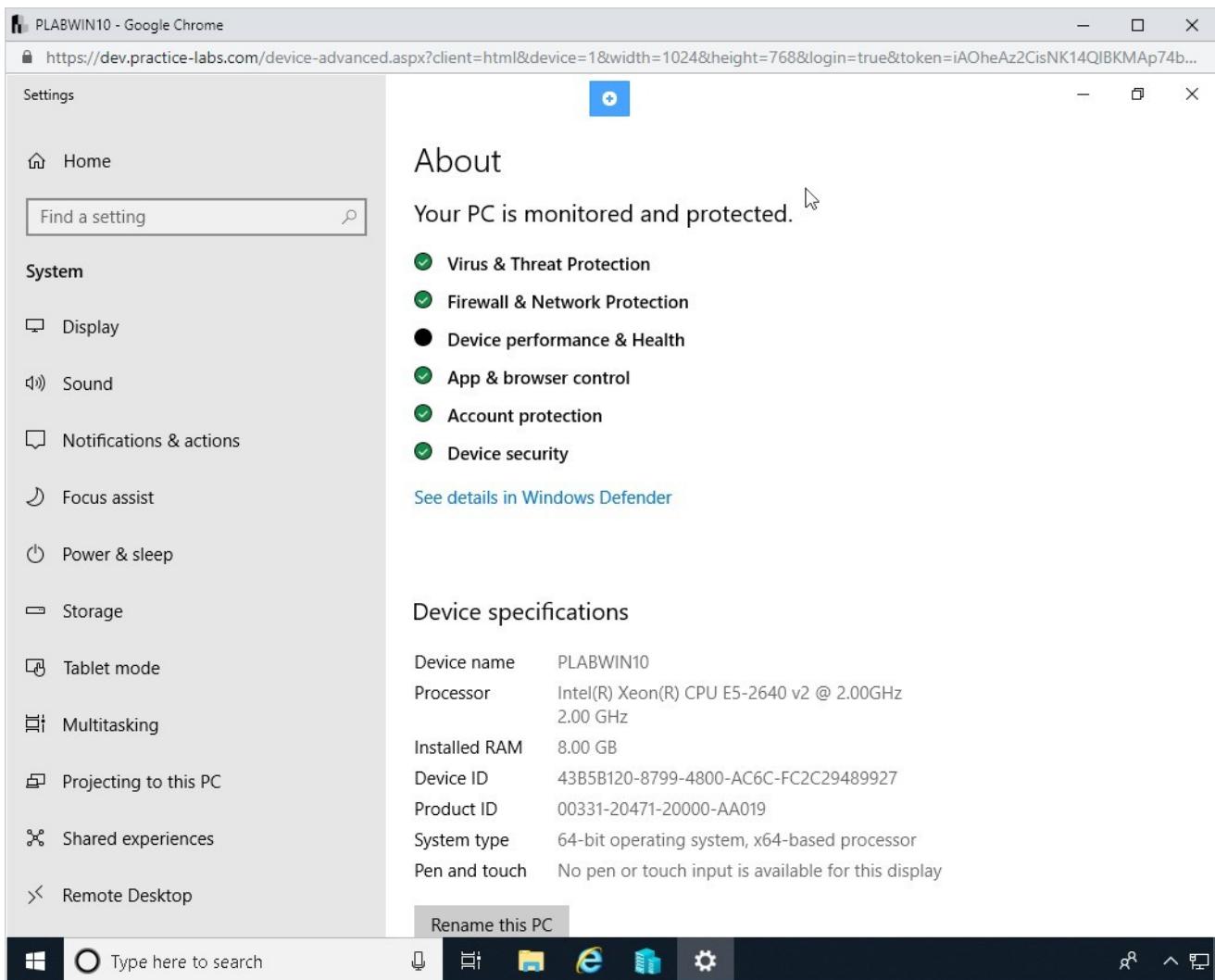


Figure 5.5 Screenshot of device PLABWIN10: Screen shows the system related information

Finally, close the **System** window.

Leave the devices you have powered on in their current state and proceed to the next exercise.

## Exercise 6 - Checking for Application Compatibility

Compatibility has to be checked while installing application software. To install and run, an application needs to be compatible with the operating system, and the machine should meet the hardware requirements. Operating systems have different versions. For example, the Windows operating system has two versions. They are:

- 32-bit (x86)
- 64-bit (x64)

32 and 64-bit refers to the way the CPU handles information. 64-bit operating systems are more efficient than 32-bit operating systems. In this exercise, you will learn about application compatibility.

## Learning Outcomes

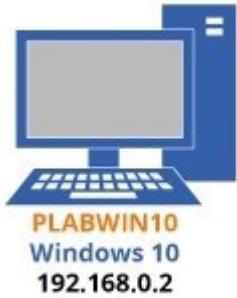
After completing this exercise, you will be able to:

- Know about application compatibility

## Your Devices

You will be using the following devices in this lab. Please power these on now.

- **PLABWIN10** - (Windows 10 - Domain Member)



## Task 1 - Knowing about Application Compatibility

An application has hardware compatibility requirements. An application cannot run if necessary hardware resources are not available on the computer system.

In this task, you will learn about application compatibility.

### Step 1

Ensure you are connected to **PLABWIN10**.

Click on the **Internet Explorer**.

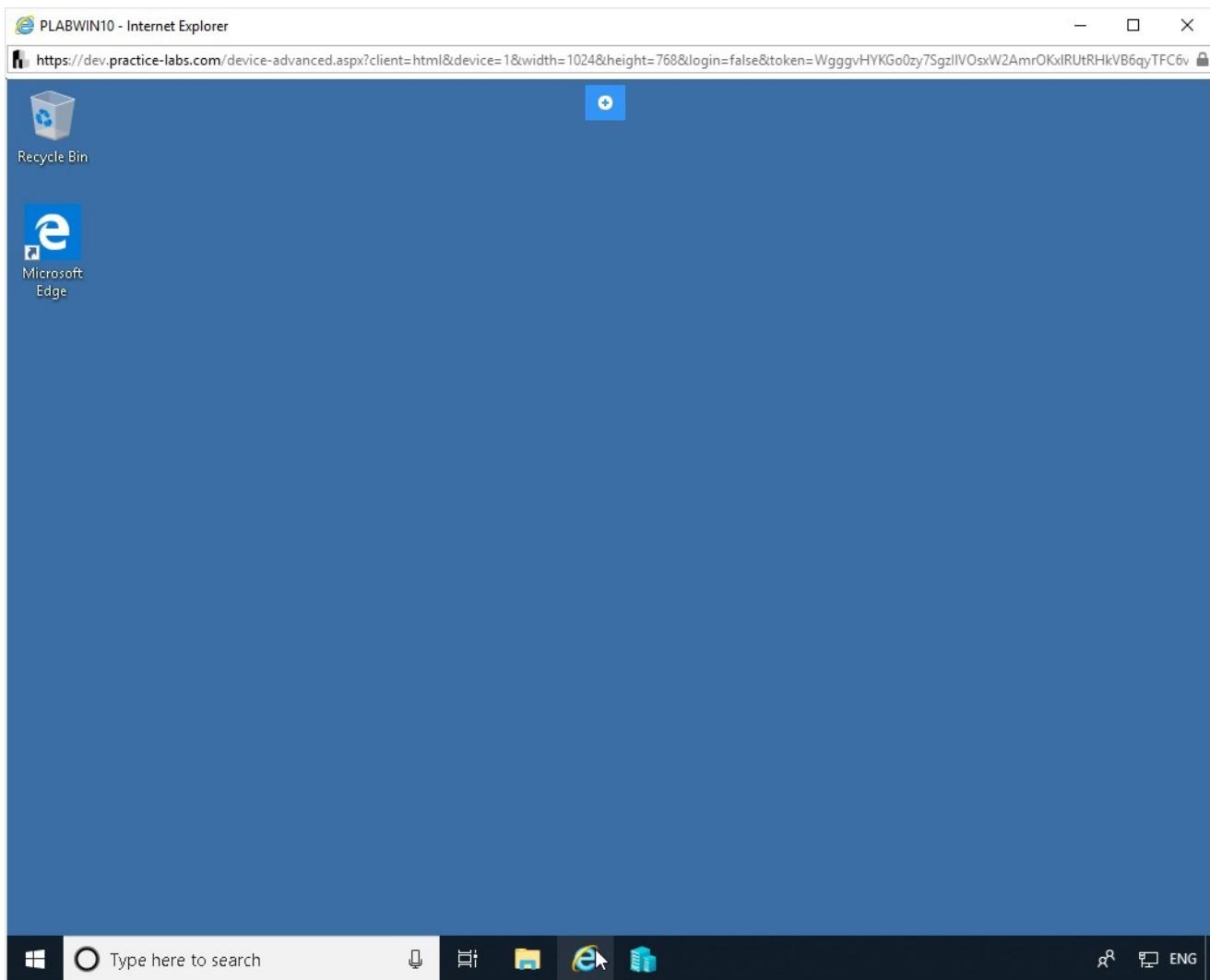


Figure 6.1 Screenshot of device PLABWIN10: Screen shows how to open the internet explorer

## Step 2

Let's assume that you have a software named Camtasia and you need to check its hardware requirements. You can simply search for its requirements in a search engine.

In the **Internet Explorer** search text box, type the following:

CAMTASIA REQUIREMENTS

Click the **Search** icon.

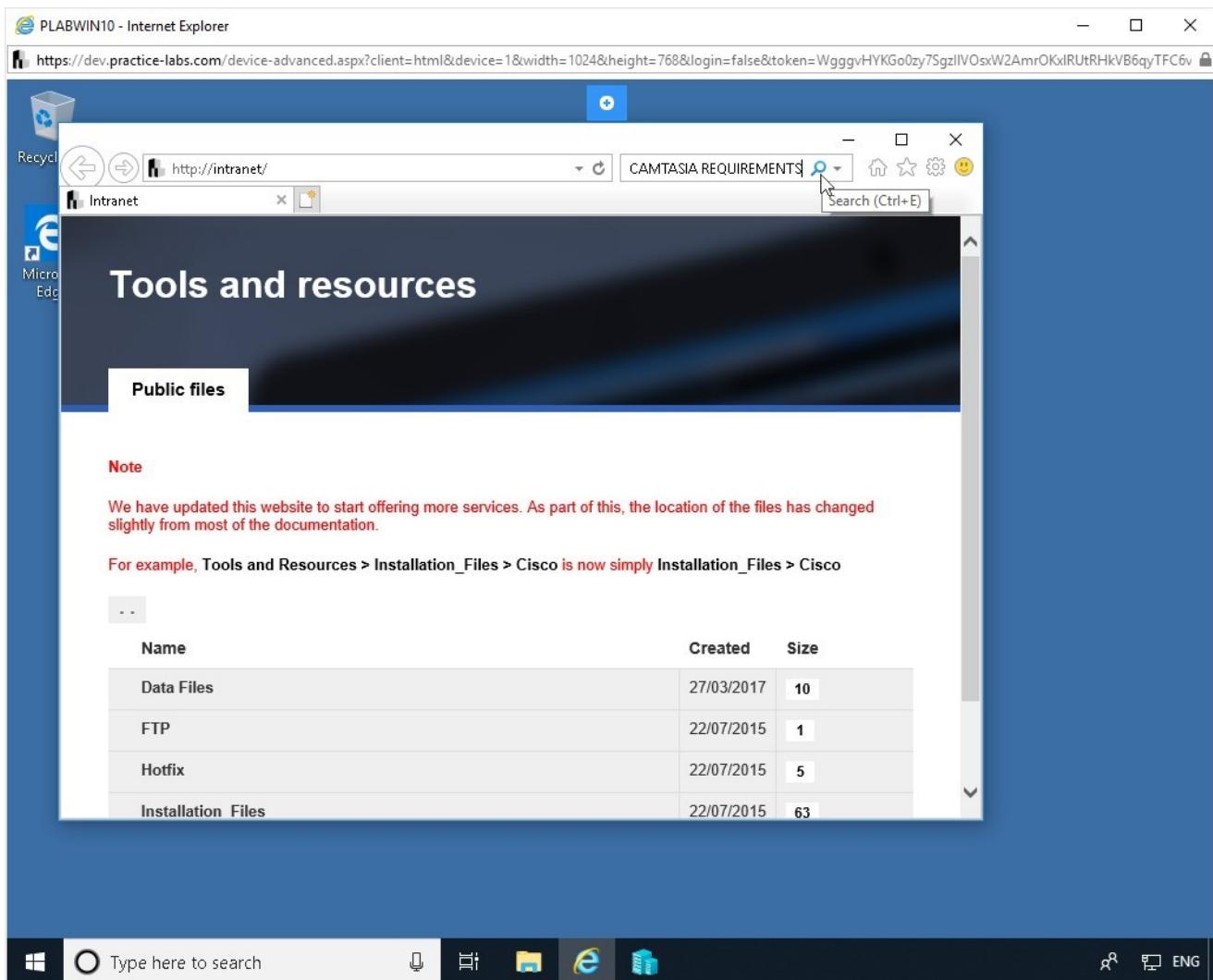


Figure 6.2 Screenshot of device PLABWIN10: Screen shows how to perform search in internet explorer

## Step 3

Press **Accept** to popup notice.

Scroll down until you see the requirements. You may need to click the **5 more rows ...** link to view the information.

Observe that following hardware requirements are mentioned:

- CPU speed
- RAM size

Then observe, that there are sections for **Minimum Specifications** and **Recommended Specifications**.

Finally, close **Internet Explorer**.

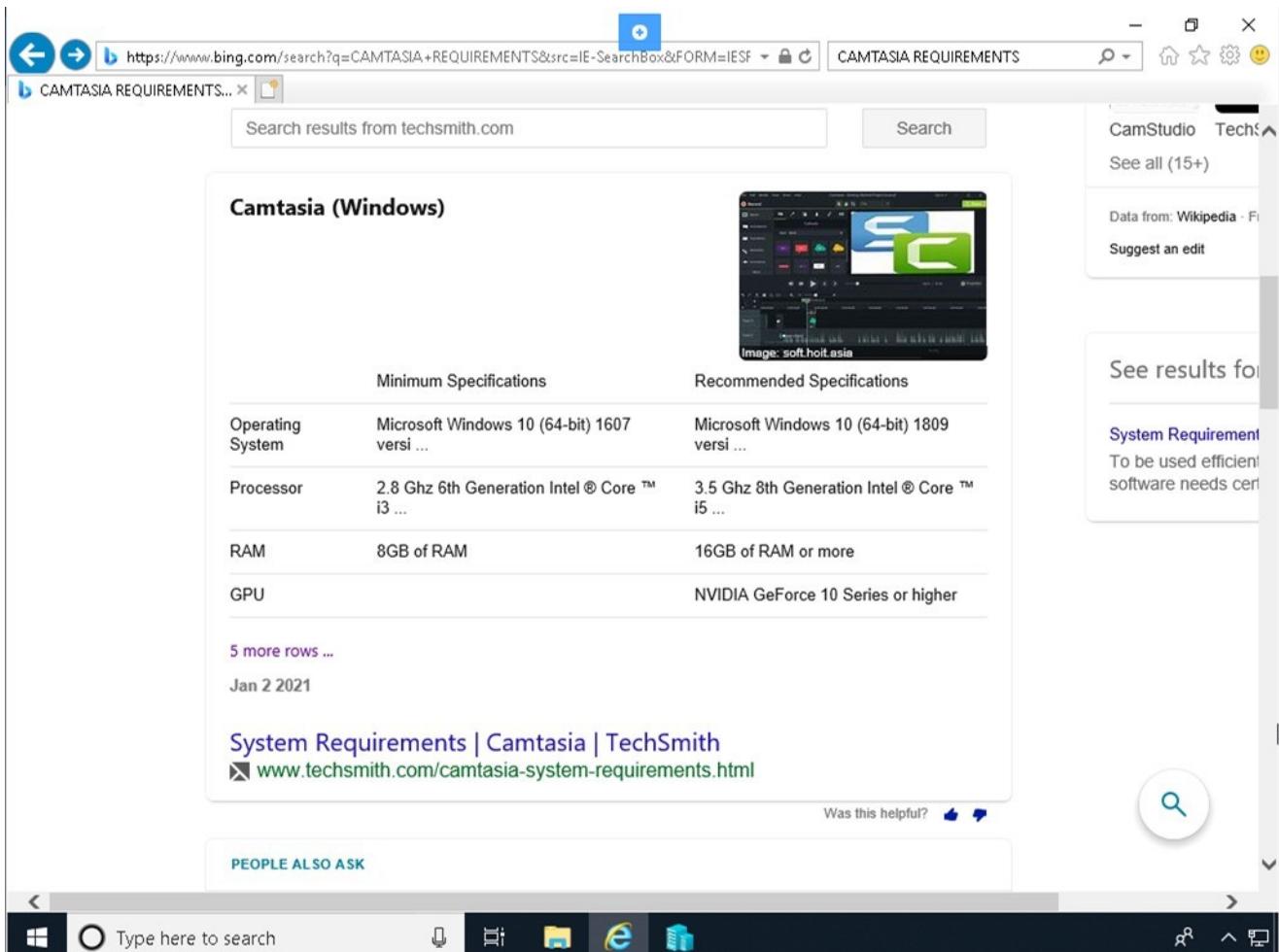


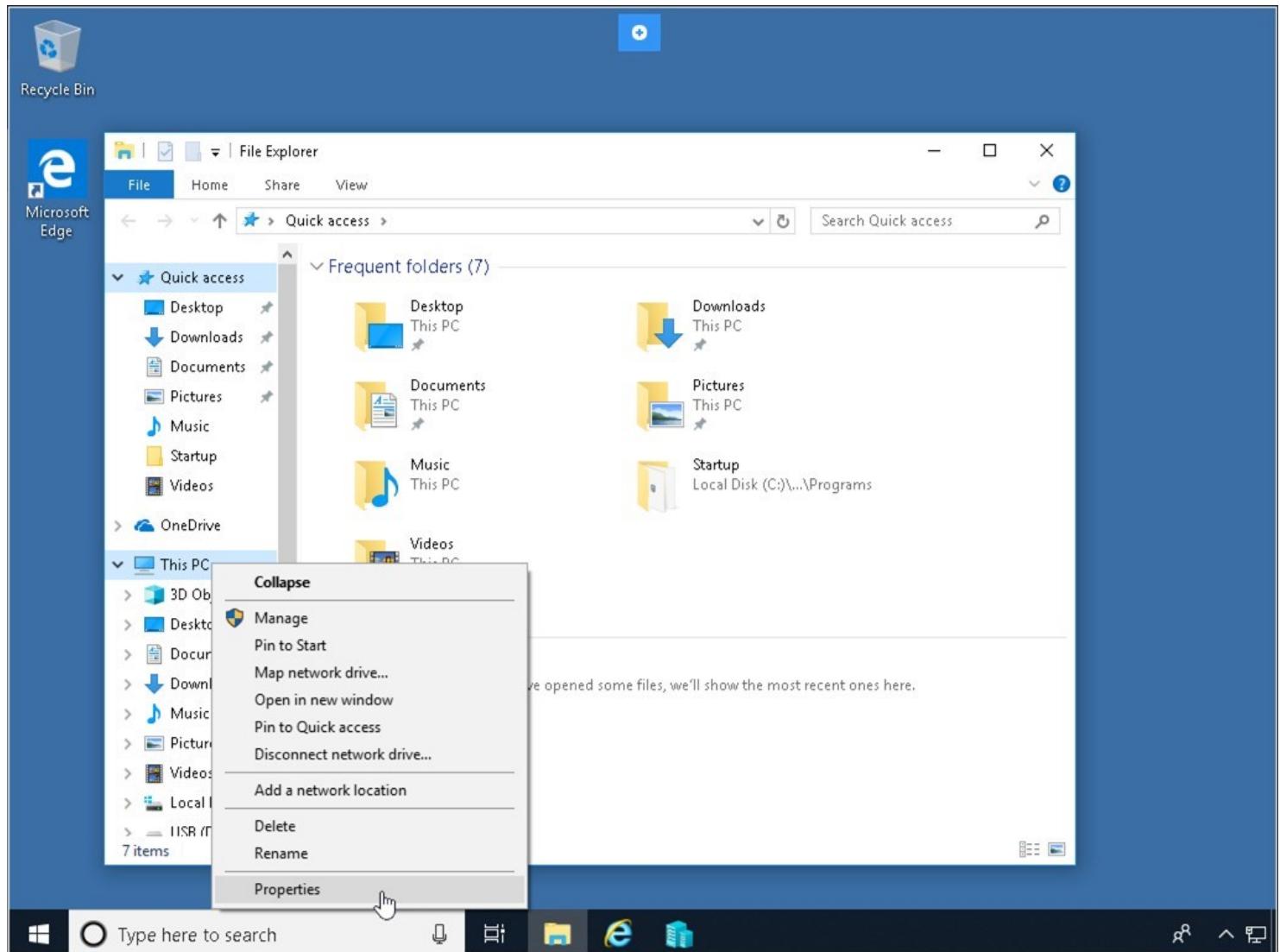
Figure 6.3 Screenshot of device PLABWIN10: Screen shows the hardware and software requirements for Camtasia

## Step 4

You will now you will check the system hardware and software configuration of **PLABWIN10**.

**Open File Explorer**

**Right-Click This PC and select Properties**



## Step 5

The **System** window is displayed.

Observe the panel. It has the hardware and software related information of the system.

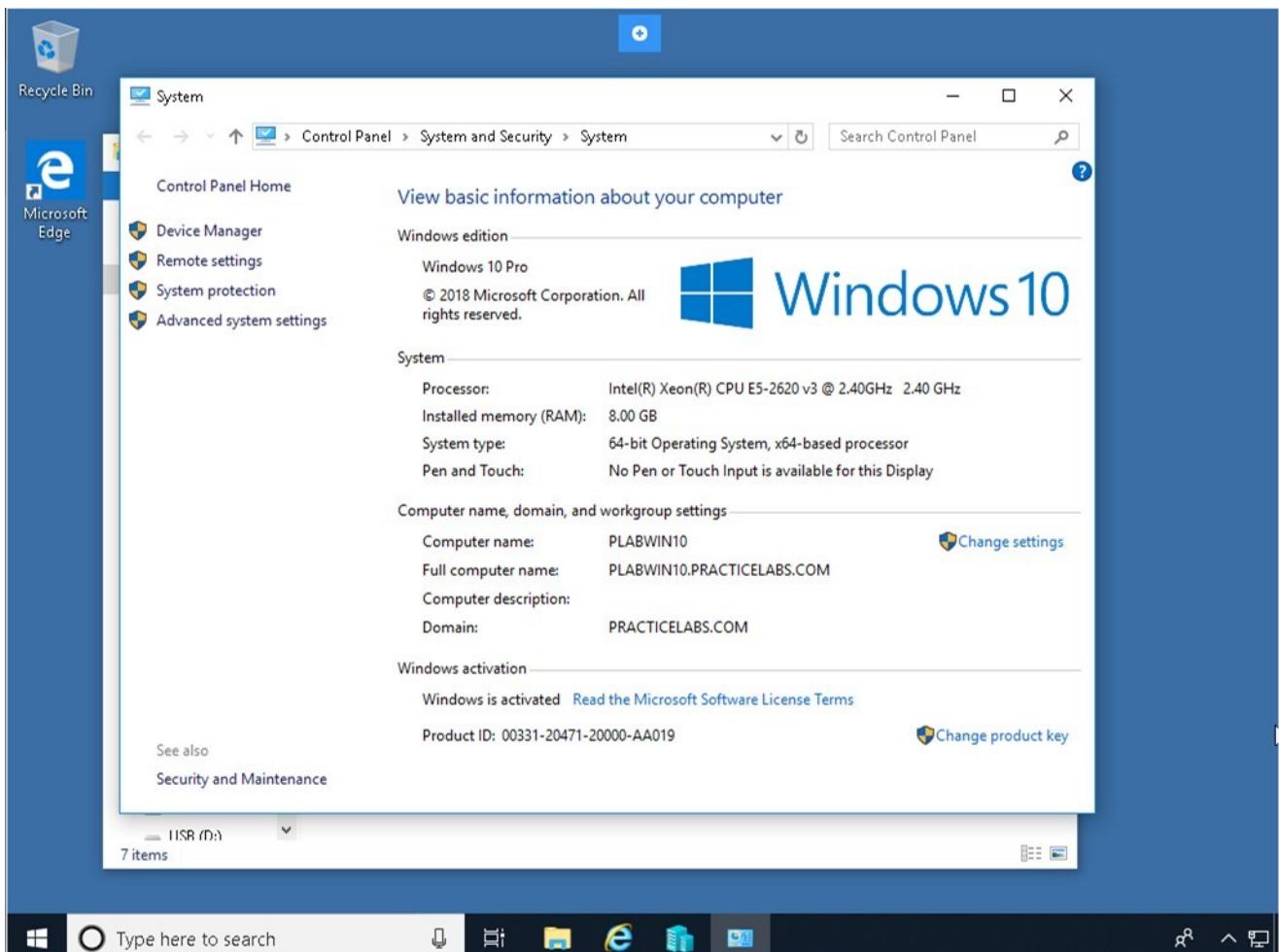


Figure 6.5 Screenshot of device PLABWIN10: Screen shows the hardware and software related information

Finally, close the **System** window.

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## Review

Well done, you have completed the **Installing System Configuration Settings** Practice Lab.

## Summary

You completed the following exercises:

- Exercise 1 - Updating the Device Drivers
- Exercise 2 - Configuring Settings

- Exercise 3 - Performing Windows Refresh
- Exercise 4 - Prepare a Boot Drive
- Exercise 5 - Ensure Prerequisites/Hardware Compatibility
- Exercise 6 - Check for Application Compatibility

You should now be able to:

- Update a Device Driver
- Configure time/date/region/language settings
- Perform Windows Refresh
- Prepare a Boot Drive
- Know about prerequisites/hardware compatibility
- Know about application compatibility

## Feedback

Shutdown all virtual machines used in this lab. Alternatively, you can log out of the lab platform.