Sistemas Informáticos (Computer Systems)

Unit 06. Windows administration - Part 2

Authors: Sergi García, Alfredo Oltra

Updated November 2022

Licencia

Nomenclatura

A lo largo de este tema se utilizarán diferentes símbolos para distinguir elementos importantes dentro del contenido. Estos símbolos son:

📖 **Important**

❗ **Attention**

💬 **Interesting**

INDEX

# Unit 06. Windows administration - Part 2

1. Introduction

In this part, we continue studying Windows operating system. It's mandatory to read and understand previous class notes to continue with part 2.
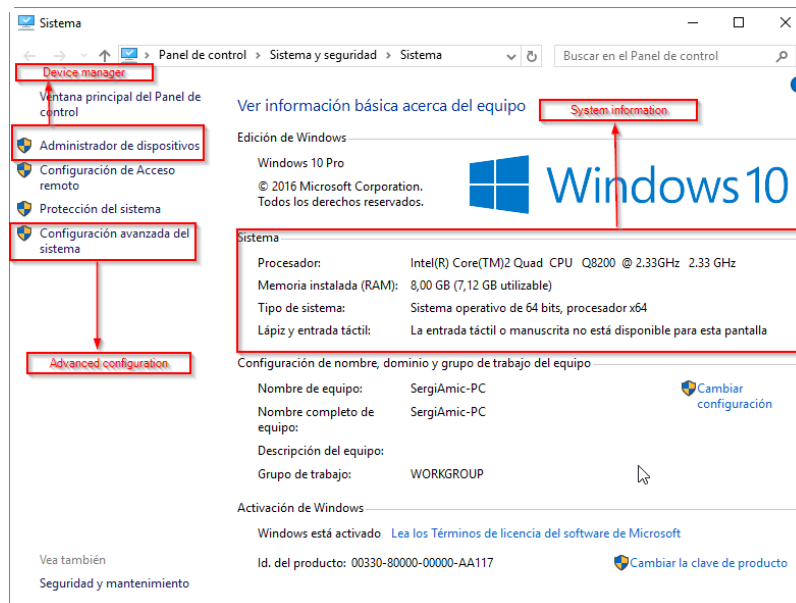
2. System properties

In this video, you can watch several ways to go to "System properties" in Windows 10

http://www.isunshare.com/windows-10/6-ways-to-open-computer-or-system-properties-in-windows-10.html The most common way to arrive is right click on "This PC" and then in properties.
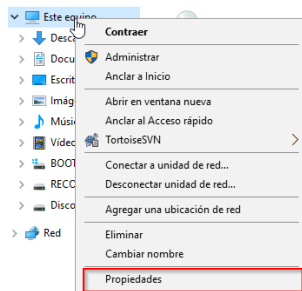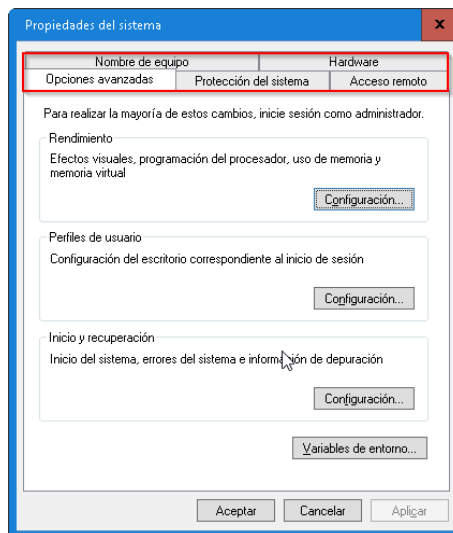
System properties is a menu where we can check our system specs like CPU, RAM, Windows version, …

We are going to study two sections of System properties: "Advanced system settings" and "Device manager"
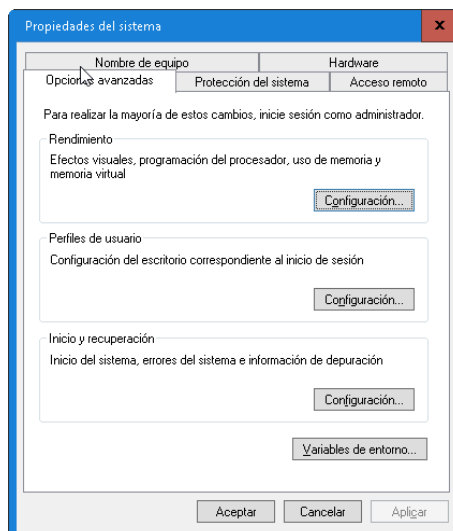
2.1 Advanced system settings

In "Advanced system settings" we have several tabs, each one with a lot of options to modify.

The most important functions are:

Tab "Advanced options": you can configure several things, like user profiles, start and recovery, performance and environment variables.


Most important features are:

- **Performance**: you can configure how many resources uses your desktop (for example, deactivating effects for low computers) and configure how your system uses virtual memory.
- **Environment variables**: there you can define environment variables. It is useful to configure a lot of applications, like development environments.

Tab "System protection": you can configure things like "System restoration". We recommend do not use system restoration (Disable it) and use other programs to make backups of your system, like "Clonezilla" http://clonezilla.org/ .
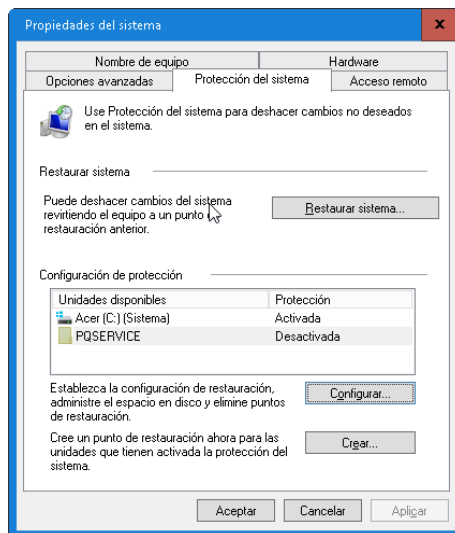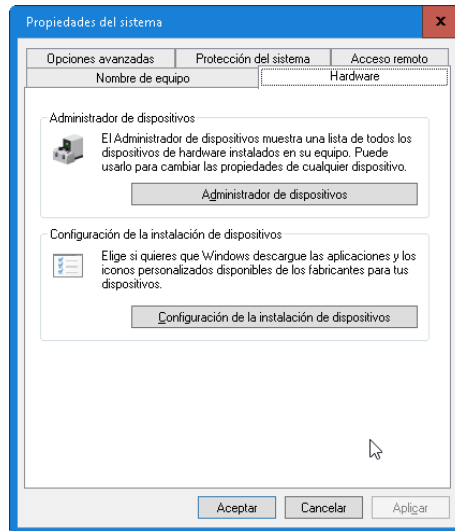
Tab "Computer name": you can change computer name, and also you can configure your Windows to be in a workgroup or to join a domain.
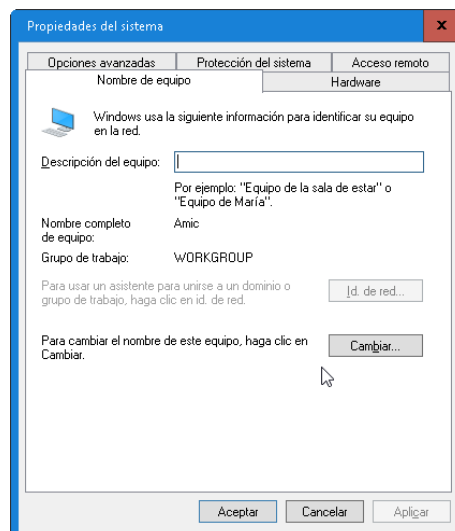
 Tab "Remote access": there you can configure if you can receive remote assistance (for example, to receive support through Internet).
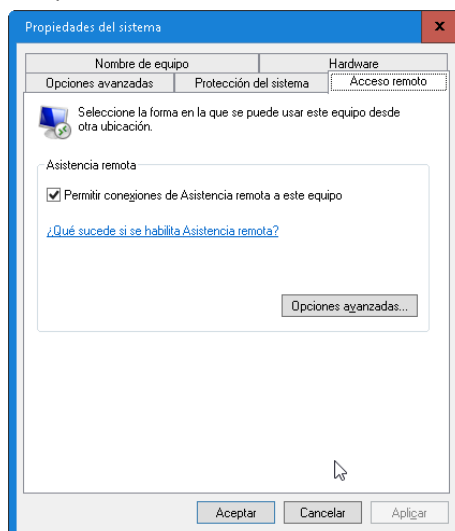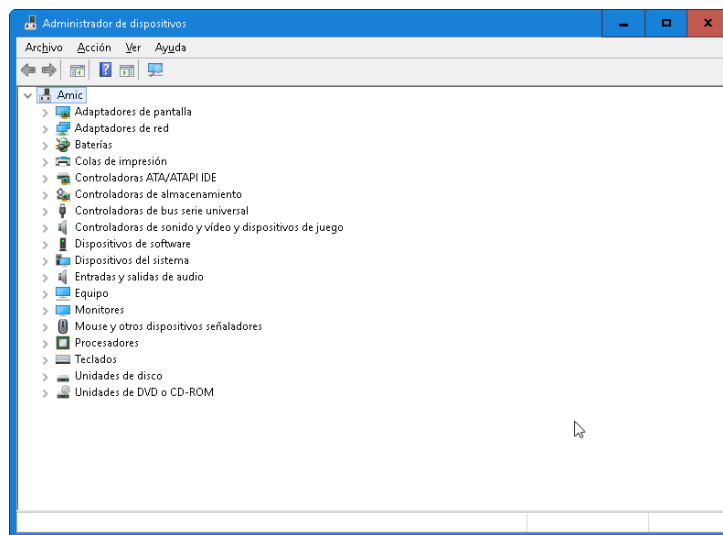
Tab "Hardware": you can access to device manager and run a manager to add new devices.

2.2 Device manager

Device manager is a menu to manage devices of our computer. In this Video, you can watch several ways to go to "Device Manager" in Windows 10 https://www.youtube.com/watch?v=nEyQMq7bwlY

Basic management is explained in https://www.youtube.com/watch?v=kXIDFUlWUDs

The main operations that we can do are:

- Enable/Disable a device: useful when a component is causing trouble.
- Update driver of a device.
- Check state of a device.
- Uninstall components: several times are useful to uninstall a device to run again Windows auto-configuration. It can solve a lot of problems.
- Some devices let you do an advanced configuration (Example, configure energy saves in a Wi-Fi device). Those features depend on the installed driver.

3.   Security management

Windows 10 has several tools related to security. We are going to explain the most important tools available:

- **BitLocker**: BitLocker is a utility to cipher hard disk information. In this video, you have information of how to use BitLocker to cipher a hard disk https://www.youtube.com/watch?v=nLh0jSfv6jA
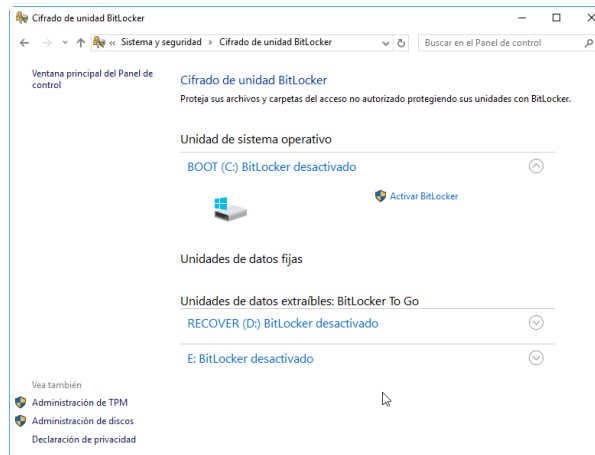

- **Firewall**: a firewall is a tool that monitors connections in our system and decides if a connection is accepted or denied. Firewall could be enabled or disabled.
    - In this video, you can watch how to enable/disable firewall on Windows 10 https://www.youtube.com/watch?v=QhbzE6EBCno
    - In this video, you can watch how to add a rule on the firewall https://www.youtube.com/watch?v=2AcqibSJ8ng

> ! **Attention** If you have problems with a connection, the first step you have to do is disable your firewall to confirm if it is the problem.
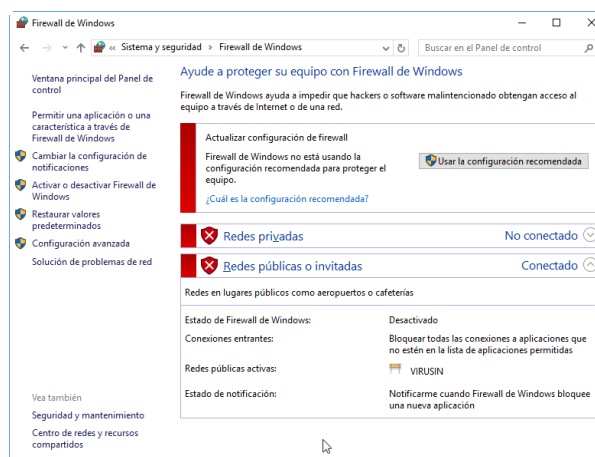
- **Windows defender**: Windows defender is an antivirus created by Microsoft. Nowadays is a good alternative to other products like AVG, Avast, ….
    - To use it properly, you have to update virus databases and periodically run a scan.
    - In this video, you can watch how to run a scan https://www.youtube.com/watch?v=dy7rHgPcbQc
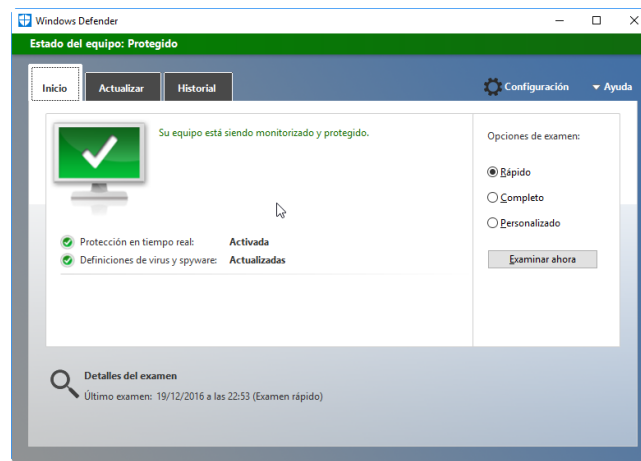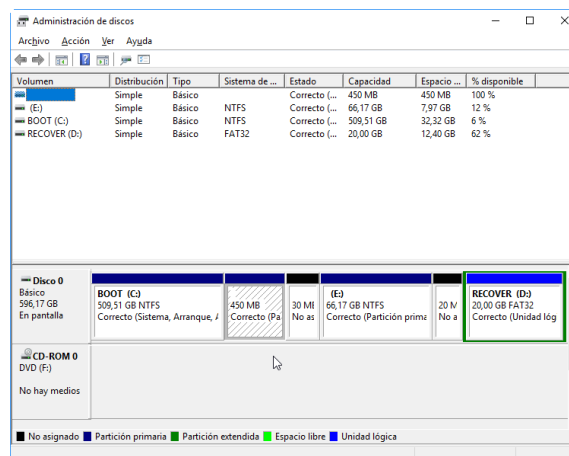
4.   Disk Management

Disk management is menu to manage hard disk of our computer.

In this Video, you can watch several ways to go to "Disk Management" in Windows 10.

http://www.isunshare.com/windows-10/7-ways-to-open-disk-management-in-windows-10.html

- Disk management has several important operations like:
    - Create/Delete a partition.
        - In this video, you can watch how to create a partition
          https://www.youtube.com/watch?v=f8WzSRQ2NtY
    - Shrink/Expand a partition.
        - In this video, you can watch how to shrink and how to expand a partition
          https://www.youtube.com/watch?v=tJiakVgAtn4
    - Create and manage Virtual Units (a file that works as a virtual unit).
        - In this video, you can watch how to manage Virtual Units
          https://www.youtube.com/watch?v=gDLtOehX7NQ

5.   Msconfig

Msconfig is a place where you can configure several things related with Windows 10 startup.

There are several ways to run Msconfig. The most common way is going to "Run" (Windows key + R) and type "msconfig".
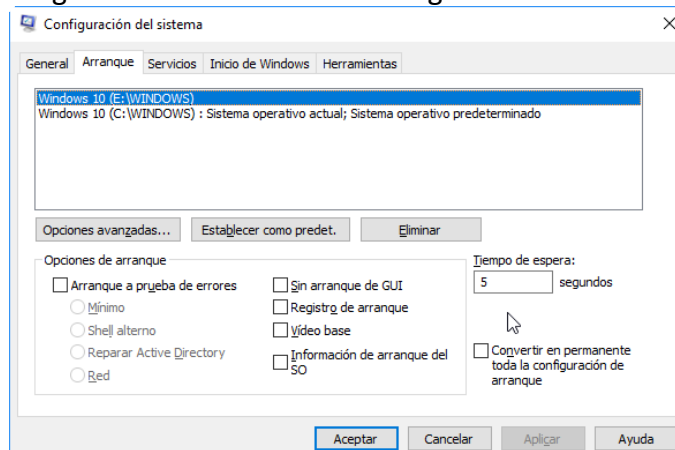
In   this   video,   you   can   watch   other   method   to   access   to   Msconfig
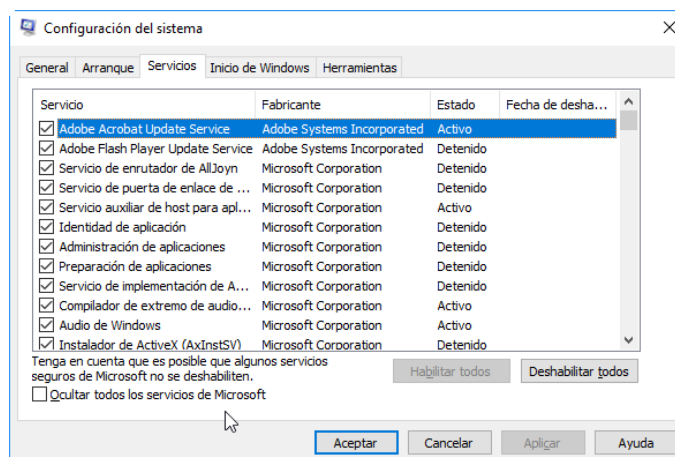https://www.youtube.com/watch?v=D0X29Jt2CKY

Msconfig has several tabs:

- **General**: you can select how to boot your system (complete, diagnosis) or select which components load.
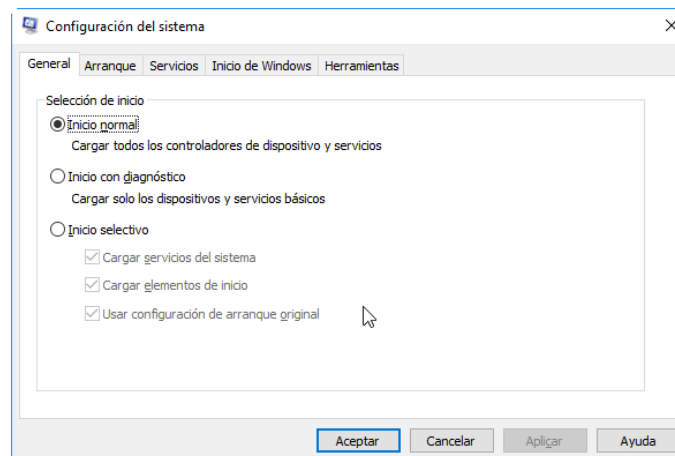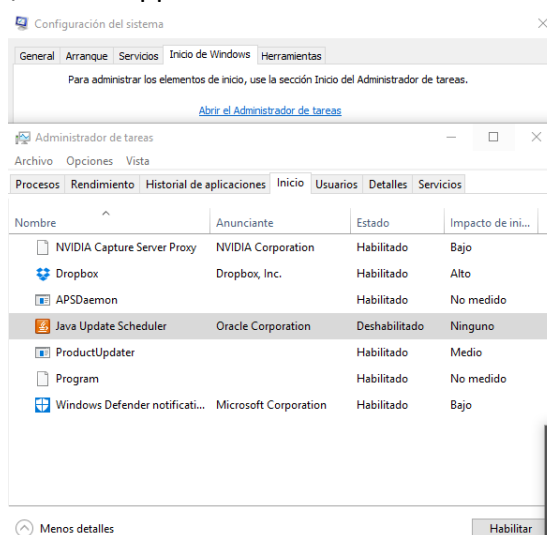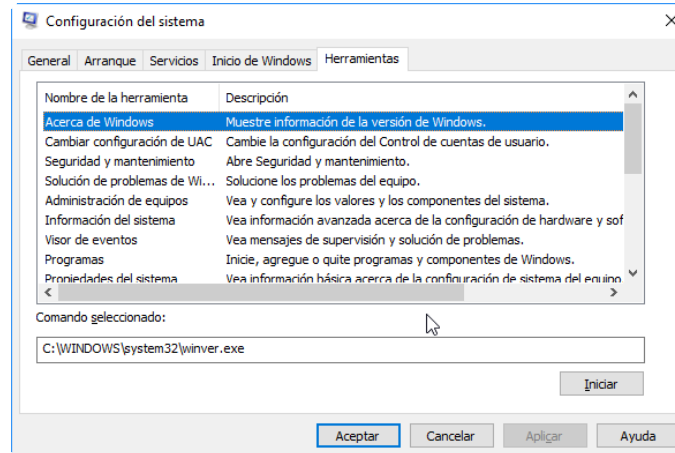
- **Boot**: you can configure Windows 10 boot manager.

- **Services**: you can select services that will be started automatically when you start your computer.

- **Start**: you can enable/disable applications that run when Windows starts.

- **Tools**: you can use this tab as a shortcut to several system tools.

6.   Additional material

[1] Windows Training https://learn.microsoft.com/es-es/training/courses/browse/

7.   Bibliography

[1] Windows 10 https://en.wikipedia.org/wiki/Windows_10
[2] Microsoft support https://support.microsoft.com/