

# Module 3 Installation and Maintenance of Hardware and its components.

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1) What is User Management?

- User management is the ability for administrators to manage devices, system, applications, storage system, networks, and services, and user access to other various IT resources.
- User management is core part to any identity and access management solution, in particular directory service tools.

2) Where Can we access the User Management?

- Open the Start Menu.
- click on settings.
- From the settings window, choose Accounts option.
- In the Accounts window, choose the account setting you want to configure.

3) Why is User management needed?

- User management enables administrators to grant access and manage user access and control user accounts.

- A User Management system forms an integral part of identity and access management (IAM) and serves as a basic form of security.
- User Management allows administrators to manage resources and organize users according to their needs and roles while maintaining the security of IT systems.
- Administrators need powerful user management capabilities that can allow them to group users and define flexible access policies.

#### 4) How to Create a User from User management?

- You can Create a Local User account for anyone who will frequently use your PC.
- Create Local User account.
- Select Start → Settings → Accounts and then select Family and other users.
- Next to Add other user.
- Select Add account.

- Select I don't have this Person's Sign-in information,
- Select Add A user without a Microsoft account
- Enter a User name and password

5) How to Change the Password of the administrator from the User Management.

### Method - 1

- Open the windows Start menu.
- Then select settings.
- Then click on Accounts.
- Next, click on Your info.
- click on Manage my Microsoft Account
- Then click More actions.
- Next, click Edit Profile from the drop-down menu.
- Then click Change your Password.
- Enter your current Password and your new Password.
- Then click Save.
- Restart your computer to sign in with a new password.

## Methode 2 :-

- Open the Windows Search Bar.
- Then type control panel and hit enter.
- click change account type under User Accounts.
- Select the User Profile you would like to reset the password for.
- click on change Password.
- Enter the User's new password twice. Type in a Password hint.
- Then click change Password.
- Finally, restart your computer to sign in with the new Password.

6) What is file folder permission?

- file folder permission is you specify what users are allowed to do within that folder. such as Save and delete file or Create a new folder.
- You are not limited to choosing one of the standard permissions. Settings (Full Control, Modify, Read & Execute, list Folder contents, Read, or write).

7) Shuring and ntfs what is the use of file and folder permission?

→ Shuring Permissions are configured in the "Advanced sharing" properties in the "Permissions" settings. Shuring Permissions can be used when sharing folders in FAT and FAT32 file systems.

→ NTFS Permissions apply to users who are logged on to the Server locally; Shuring Permission don't. NTFS Permission are configured on the Security tab in the File or Folder properties.

8) Write down the steps to give a folder read only permission.

→ Open windows Explorer and navigate to the file you want to edit.

→ Right-click the file name and select "Properties".

→ Select the "General" tab and clear the "Read-only" check box to remove the read-only attribute of

Select, the check the box to set it.  
click "ok" to save your changes.

### Read - only Folders

1. click the windows "start" button and type "cmd" in Search Field.
2. Press "Enter" to open the Command window.
3. Type the following command to remove the read-only attribute from a folder.  
`attrib -r drive:\Path\Foldername`

Press "Enter", replacing "drive," "Path" and "Foldername" with the Full Path to the folder you want to change. Use the equivalent command, replacing "-r" with "+r" to set the folder to read-only.

4. Type "exit" and Press "Enter" to close the Command window.
- 5) write a steps give a file only admin permission.  
→ Access the Properties dialog box.

- Select Security tab.
  - The top portion of the dialog box lists the users and groups that have access to the file or folder.
- click Edit.
- In the group or user name section, select the user admin set permissions for.
- In the Permission Section, use checkboxes to select the appropriate permission level.
- click apply.
- click okay.

The new permissions are added to the file or folder.

- 10) Do a practice to change the ownership of the folder and the sub folders in it.
- Right-Click on a file or folder.
  - Select Properties.
  - Click the security tab.
  - Click "change" next to the owner name.
  - Click Advanced.
  - Click Find Now.

- Select your username and click ok.
- click apply. If you're modifying a folder you might want to.
- click ok.
- click Add. Now it's time to make sure you have all kinds of permissions.
- click Select a Principal.
- click Advanced.
- click Find Now.
- Select your user name and click ok.
- then click ok.
- click your User name. It's time to Verify your New permissions.
- click ok, as you're taken ownership and full permission for folder.

## II) What is OS?

- operating system (OS) is an interface between a computer user and computer hardware.
- An operating system is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.

12) What are the types of OS?

- Batch operating system.
- Multi-processor operating system.
- Multiprogramming operating system
- Distributed operating system.
- Time sharing OS
- Network OS
- Mobile OS
- Multi-tasking OS
- Client/Server OS
- Real-time OS

13) Create bootable Pendrive for Kali Linux and install OS.

#### Method-1

- Plug your USB drive into an available USB port on your PC.
- Open the Etcher by double-clicking on its icon.
- Now, click on the button labeled as "Flash from file" and select the Kali Linux ISO file you want to flash.

- Now click on the button labeled as "Select Target".
- Select the desired drive and click on the "Select" button.
- Now click on the "Flash" button.
- You have to wait until the flashing process gets completed.
- Once Etcher alerts you that the image has been flashed, you can safely remove the USB drive and proceed to boot into Kali with it.

## Method - 2

- First of download Universal USB Installer.
- To install Universal USB Installer, double click on the downloaded file.
- Once the installation prompt gets opened, click on the Next button as shown in the above image.

- Now, click on the dropdown and search the type of operating system you want to select. In this case, I have chosen Kali Linux because I want to make a Kali bootable USB drive.
- Click on the "Browse" button to locate and select the ISO file of the desired operating system as shown in the following given image.
- Click on the dropdown given under the "Select the drive letter of your USB".
- Now, click on the "Create" button which will ask your permission to perform certain operations. So to allow it, click 'yes' button.
- After click on the "yes" button flashing process will start immediately as show below:
- Once the flashing process gets completed, click on the "Close" button your Kali bootable USB drive ready to use.

14) Create a bootable Pen drive for windows 10 and install OS.

### \* Using Rufus Software

- Download the Rufus Software
- Double-click the Rufus.exe file to launch the tool.
- Under the "Device" section, Select the USB Flash drive.
- Under the "Boot Selection" section, click the select button on the right.
- Select the Windows 10 ISO File from the folder location.
- Click the open button.
- Use the "Image option" drop-down menu and Select the "Standard Windows installation" option.
- Use the "Partition Scheme" drop-down menu and Select the GPT option.
- Use the "Target System" drop-down menu and Select the UEFI (non CSM) option
- Under the "Show Advanced Drive Properties" Section do not change the default Settings.
- Under the "Volume Label" field, Confirm a name for the drive - for example, "Windows 10 USB".

- Do not change the default Settings in the "file system" and "cluster size" options.
- Click the "Show advance format options" setting.
- Check the quick format option.
- Check the "Create extended label and icon files" option.
- Click the Start button.
- Leave the customization installation settings unchecked.
- Click the OK button to confirm.
- Click the close button.
- After you complete the steps, Rufus will create a "USB Flash drive to install windows 10 on a device Using UEFI."

### \* Using Command-Prompt

- Run Command-Prompt in Administrator mode.
- Connect the USB device to the computer that is to be made bootable.
- Type the command 'diskpart' and then Press 'Enter'.



- Type the Command 'list disk' to display a list of all the available storage devices on your system. Press Enter to Continue.
- Select the disk that is your Pendrive. Generally, it is marked as Disk 1, it might vary system to system make sure not to select any other available disk as it will get formatted. To choose the disk type the command 'select disk 1' and Press Enter.
- To make a Pendrive bootable, there is a need to format it to clean the existing data. This can be done by the use of 'clean' command.
- Type the Command 'Create Partition Primary' and Press Enter. This will make the disk Primary and ready to be made bootable.
- To choose the Partition created as primary, type the command 'select partition 1' and Press Enter.

- Before making the disk bootable there is a need to format it as NTFS because windows uses NTFS file system for storage. This can be done with the use of command 'Format = fs NTFS' and Press Enter.
- Type the command 'active' and Press Enter. This will mark the Primary bootable partition as Active.
- Type the command 'exit' to exit DISKPART and Press Enter. Now close the cmd window.
- Now Copy all the data from the OS installation disc to your USB drive that is just been made bootable.

Now, this Pendrive can be used to install the desired operating system on any computer.

Install windows to the new PC

- Connect the USB flash drive to a new PC.
- Turn on the PC and Press the key that opens the boot-device selection menu for the computer, such as the Esc/F10/F12 keys. Select the option that boots the PC from the USB flash drive.

Windows Setup starts. Follow the instructions to install windows.

- Remove the USB flash drive.
- 15) Creating a Pen drive for mac os Big Sur with Unibeast.
- Download macos Big Sur.
  - After downloading macos Big Sur, the installer will automatically launch. close the installer.
  - Open Finder → Applications Right-click on Install macos Big Sur → Show Package Contents.
  - Open Contents → Resources.
  - Launch a new Terminal window by going to Applications → Utilities → Terminal
  - Type Sudo followed by a space in the terminal window.

- Drag CoreInstallMedia to the Terminal window. From the Resources folder noted in step 1.
- Type -Volume followed by a Space
- Open Finder → GO → GO TO FOLDERS
- In the 'GO TO THE FOLDERS' box type /Volumes and click to GO button
- Connect a USB Flash drive to your Mac; it should appear in the Finder window.
- Drag the USB Flash drive Volume into the Terminal window.
- Press the Return key on the keyboard to submit the full Terminal Command and when prompted, enter your password.
- When prompted type a "y" and press the Return key on the keyboard to submit.

Terminal may ask for access to files on the removable volume.

- The install process will begin by purging the contents of the connected USB drive. Afterward, the installer files will be copied to drive.

Because this process takes a few minutes to complete, you'll need to exercise patience throughout the install process.

16) What is clean install?

- A clean install is a software installation in which any previous version is eradicated.
- Whenever an OS is installed on a new computer, or an application is installed for the first time, the installation is considered a "clean" install. With a clean install, the hard disk contains only the new OS.
- Any existing OS and user files are removed during installation because the hard disk is formatted and completely erased.

17) What is upgrade install?

- Upgrade install means switching from an older to a newer version of the operating system and preserving your files, settings and apps.
- An upgrade usually happens when you install a new version of Windows on top of the previous version preserving your files, settings, and apps.

18) Upgrade from windows 8 to windows 10.

- Open Microsoft website.
- Under the "Create Windows 10 installation media" section, click the download now button.
- Double-click the "MediaCreationTool.exe" to launch the windows 10 setup wizard.
- Click Accept to the licensing agreement.
- Select the "Upgrade this PC Now" option.
- Click the Next button.
- Select the "Keep personal files and apps" option. Alternatively, you can click the "Change what to keep" option to upgrade without preserving your files and apps.
- Click the Install button.
- Once you complete the steps, you must go through the easy out-of-box experience to finish setting up windows 10 with your desired preferences.

19) What is Partitioning?

- Partitioning is the process of dividing an input data set into multiple segments or partitions.
- The framework performs partitioning on the input data set over data sets of a parallel operator.

20) What is Partition?

- A partition is a logical division of a hard disk that is treated as a separate unit by operating systems (OSes) and file system.
- The OSes and file systems can manage information on each partition as if it were a distinct hard drive.
- This allows the drive to operate as several smaller sections to improve efficiency, although it reduces usable space on the hard disk because of additional overhead from multiple OSes.

21) What is Format?

→ Formatting Computer means completely erasing the hard drive and reinstalling the operating system and all other applications and files. All of your data on the hard disk will be lost, so you will need to back it up to an External HD, DVD, Flashdrive or another Computer.

→ Format means erase all contents and there's no Undo Function and like device.

22) Format a Partition Using Cmd,

→ Partition 1

→ Step - 1 - backup all data in External Storage.

→ Partition - 2

Step - 1 - Run Command Prompt as administrator.

Step - 2 - Open DiskPart Command Prompt. Press Enter

Step 3 :- Select a Partition

- Type list Volume and hit enter.  
All available Volumes can be  
seen including hidden Volumes.
- find the Partition to be formatted  
based on the information  
presented.
- type Select Volume + Volume Number.  
Ex. (Select Volume 5) and Press  
Enter.
- that Volume 5 is the Selected  
Partition

#### Step-4 :- Format the disk partition

Type "Format fs=ntfs quick label=data"  
and Press Enter. Wait a few seconds  
and the Volume can be successfully  
formatted.

#### Step-5 :- Type exit and Press Enter twice to stop DiskPart and close the Command Prompt.

23) List out the administrative tools.

- Component Services
- Computer Management
- Defragment and optimize Drives
- Disk cleanup
- Event Viewer.
- iSCSI Initiator.
- Local Security Policy
- ODBC Data Sources
- Performance Monitor.
- Print Management.
- Recovery Drive
- Registry Editor.
- Resource Monitor.
- Services
- System Configuration
- System Information.
- Task Scheduler.
- Windows Firewall with advanced security.
- windows memory Diagnostic.

24) What is disk management tools.

- Disk management tools are Utility Software that is used to manage data on disk by performing various functions on it.
- Moreover, they perform functions like Partitioning devices, manage drives, disk checking, disk formatting.

→ There are various types of disk management tools like disk checkers, disk cleaners, and disk analyzers.

Q5) How to delete a driver from the device management tool.

①

→ Launch windows Device Manager.

→ Find the target device. Right-click and select the Uninstall option.

②

→ There should be a Popup window next to the device driver to confirm the operation. Click the check box to make sure that driver Software is removed.

→ Wait For the Processing

→ Another Popup window should appear. Click OK to continue.

→ The last Popup window displays a message about whether to reboot the system. Click Yes to reboot the system and complete the Uninstall.

Q6) What is windows features?

→ Microsoft Windows includes a lot of features of help users. Some of its excellent features are as follows:

- Control Panel
- Cortana
- File Explorer
- Internet browser
- Microsoft Paint
- Taskbar
- Start menu
- Task Manager
- Disk cleanup

→ these all are different feature of the windows

Q7) How to install dotnet Framework 3.5 with windows features.

→ Use a windows DVD or bootable flash drive to install .NET 3.5. It's fairly simple and doesn't take a lot of time, provided you have the windows installation media.

1. Insert the installation media into your PC and look at the drive letter assigned to it.

2. Press Win+R, type cmd, and press Ctrl + shift + Enter to launch Command Prompt as an administrator.

3. Execute the following command:

~~DISM /online /enable-feature /FeatureName : NetFX3 /All /Source : C:\Sources\x86\LimitAccess~~

Dism /online /enable-feature /FeatureName : NetFX3 /All /Source : C:\Sources\x86\LimitAccess

→ It's assumed that your installation media is assigned the drive letter C. Replace the C with the letter assigned to the drive on your system.

4. The installation will take a few minutes. Once it's complete, restart your PC.

28) How to disable internet explorer in Windows feature.



\* Disable using group policy.

→ open Group Policy Editor in admin mode.

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Navigate to: Computer Configuration / Administrative Templates / Windows Components / Internet Explorer.

→ In the right hand window, double click "Disable Internet Explorer as a standalone browser".

Q) What is backup and restore?

→ Backup is the process of storing additional copies of your data in physical or virtual locations distinct from your data file storage.

Typically backup includes all the data.

→ Restore is simply the process of restoring data from a backup. As such, the two processes rely on each other to work; in other words, to restore data, you must have backup.

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30) What are the tools of backup?

- Ashampoo
- Cobian Backup
- Filefront Backup
- Backup Marker
- Comodo Backup
- Everyday Auto Backup
- Iperius Backup
- Mactel Backup

This all are the tools of backup.

31) How to restore from restore point.

- In the Search box on the taskbar, type Control panel, and then choose it from the list of results.
- In the Control Panel Search box, type recovery.
- Select Recovery > open system Restore
- In the Restore system files and settings box, select Next.
- Select the restore point that you want to use in the list of results, and then select Scan for affected programs.

→ you'll see a list of items that will be deleted if you remove this restore point. If you're okay with the deletions select close, Next, Finish.

32) How to protect system from malfunctioning due to electrical fluctuation

- Use UPS
- Use Surge Protector
- Protect telecommunication links
- Test power supplies
- Maintain proper operating temperatures
- Connect proper grounding

This all parameters are used to protect the system from malfunctioning.

33) How to block internet with Firewall.

- Open windows Firewall
- windows Firewall with "Advanced Security" you have administrator rights for the option.

- Firewall opens. Select "Outbound Rule" option given on the left side and then click on the "New Rule" option given on the right-side panel.
- Select the type of firewall rule to create. Select the program as type to create a new firewall rule. After that hit the Next button.
- Select full path of Program. For file to block the internet connection for it. ~~Here see~~
- Finally check the "Block the connection" option and move to the next window.
- As we have created a new firewall, hence give some name to it, so that we can identify it later.
- By default, the newly created firewall rule will be applied for all the three Network locations - Domain, private and public. Hence, you can simply click on the Next button.
- Your program has now been successfully.

Q2) What is OS base firewall? And Configure inbound and outbound rules.

→ A firewall acts as a gatekeeper. It monitors attempts to gain access to your operating system and blocks unwanted traffic or unrecognized sources.

A firewall acts as a barrier or filter between your computer and another network such as the internet.

### Inbound

- The inbound requests originate from outside parties, such as a user with a web browser, an email client, a service or application making service requests like FTP and SSH or API calls to web services.
- Outbound requests, on the other hand, originate from inside the network, destined for services on the internet or outside network.

Firewalls are typically designed to prevent inbound traffic from entering a network, but they can also prevent outside connections from receiving outbound traffic.