



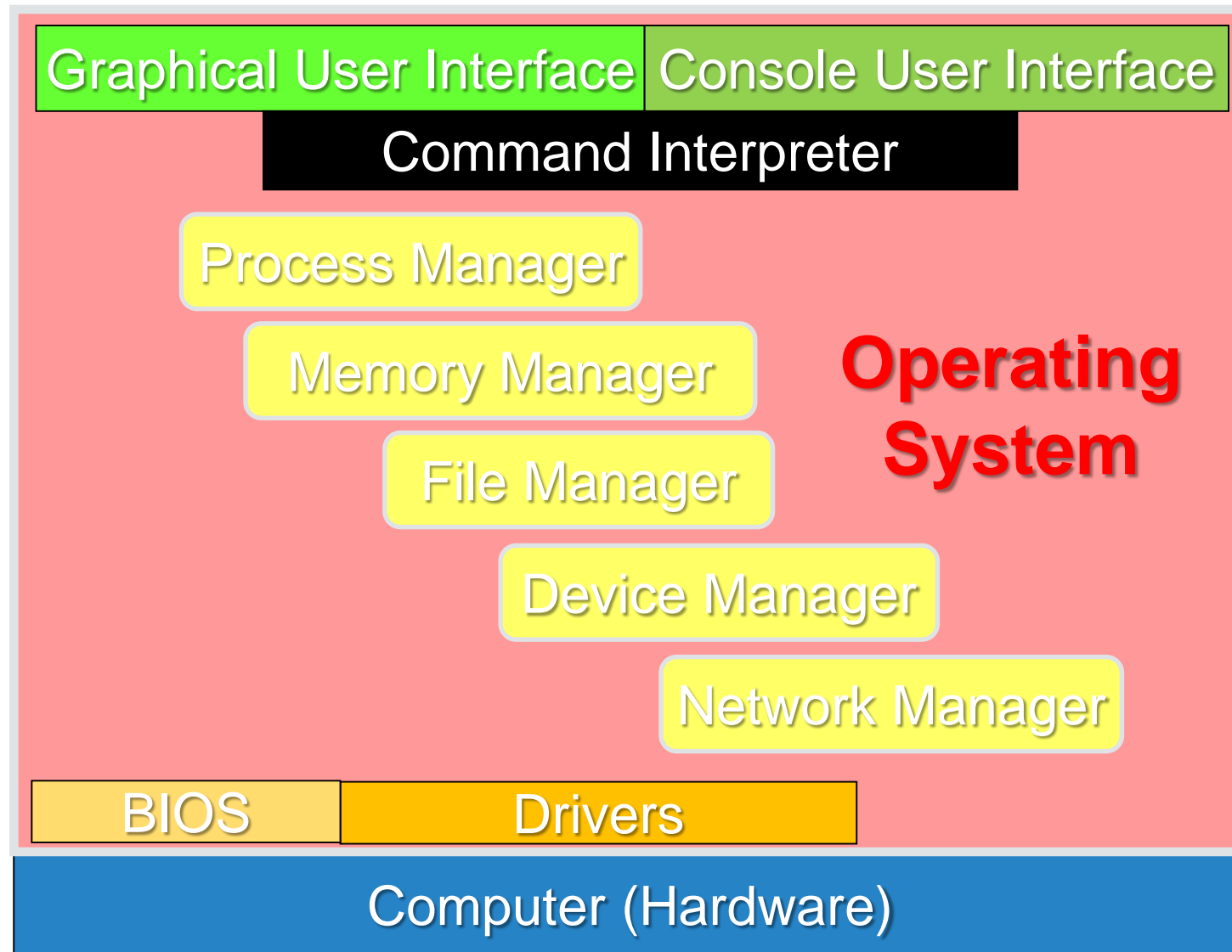
BASIC SYSTEM ADMINISTRATION (WINDOWS)

IT2758 Operating Systems

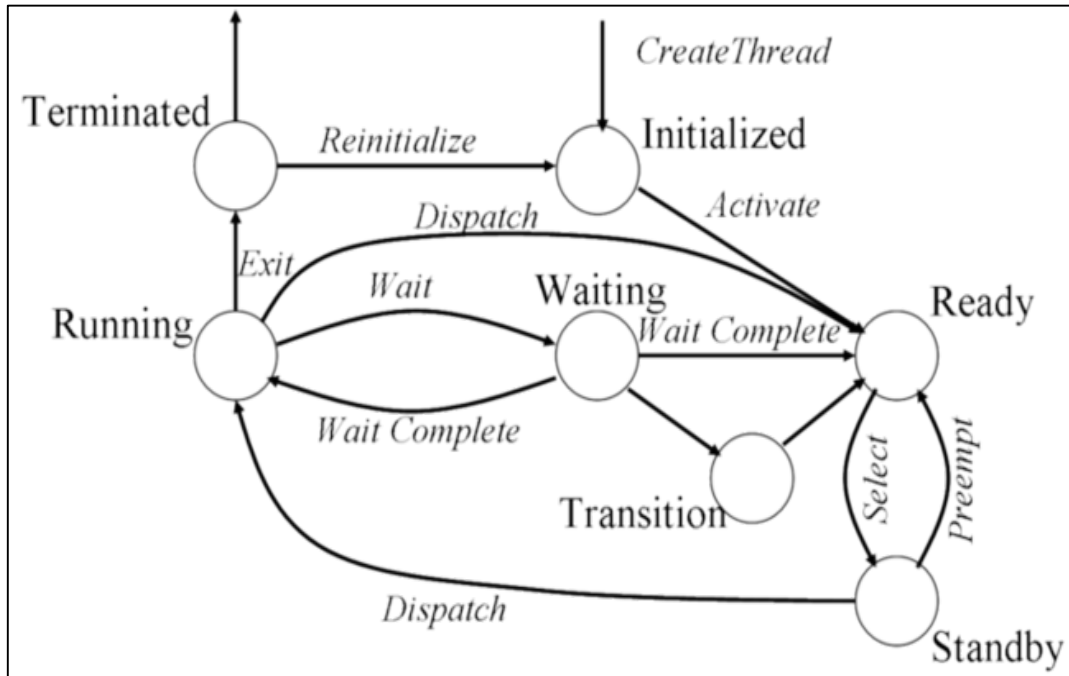
CONTENT

- ❖ Process Management
- ❖ Disk Management
- ❖ File Management
- ❖ Account Management
- ❖ Network Management

OS ARCHITECTURE



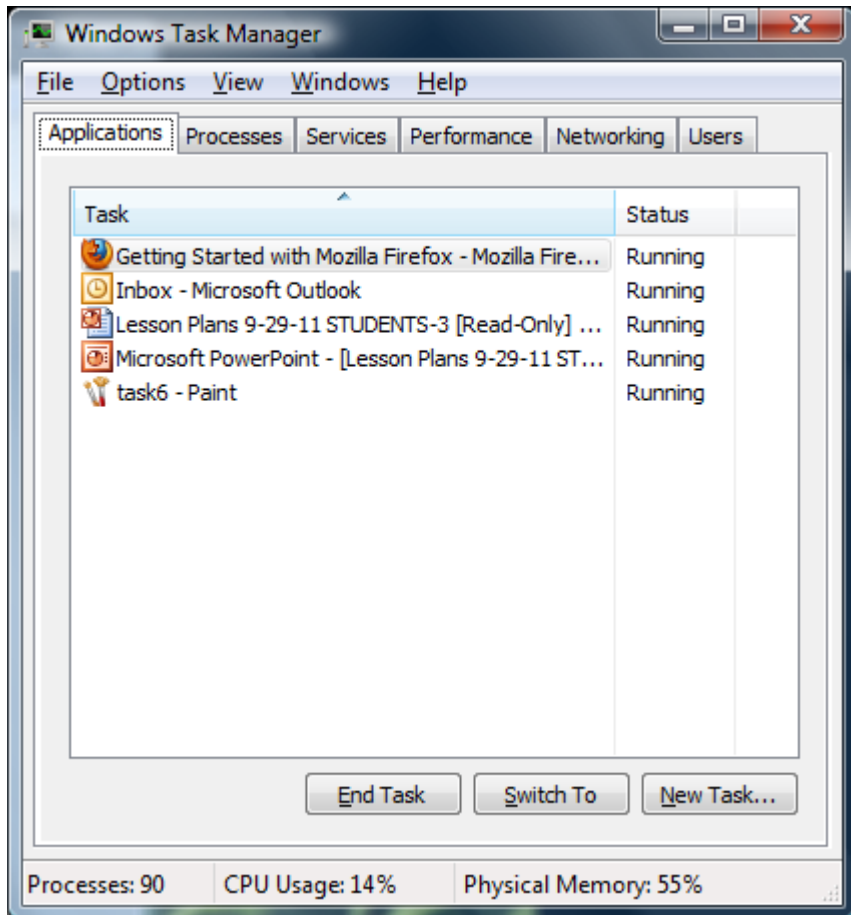
PROCESS MANAGEMENT



A thread in Windows goes into a **Ready** state, moves to **Standby** when *Picked to Run*, then is *Switched* to **Running**. From the **Running** state, a thread can be placed back into the **Ready** state if it is *Preempted* by a higher-priority thread, or consumes its allocated time slice. Otherwise, it can become *Blocked/Suspended* and moves to **Waiting** for some condition, or it has finished and is **Terminated**.

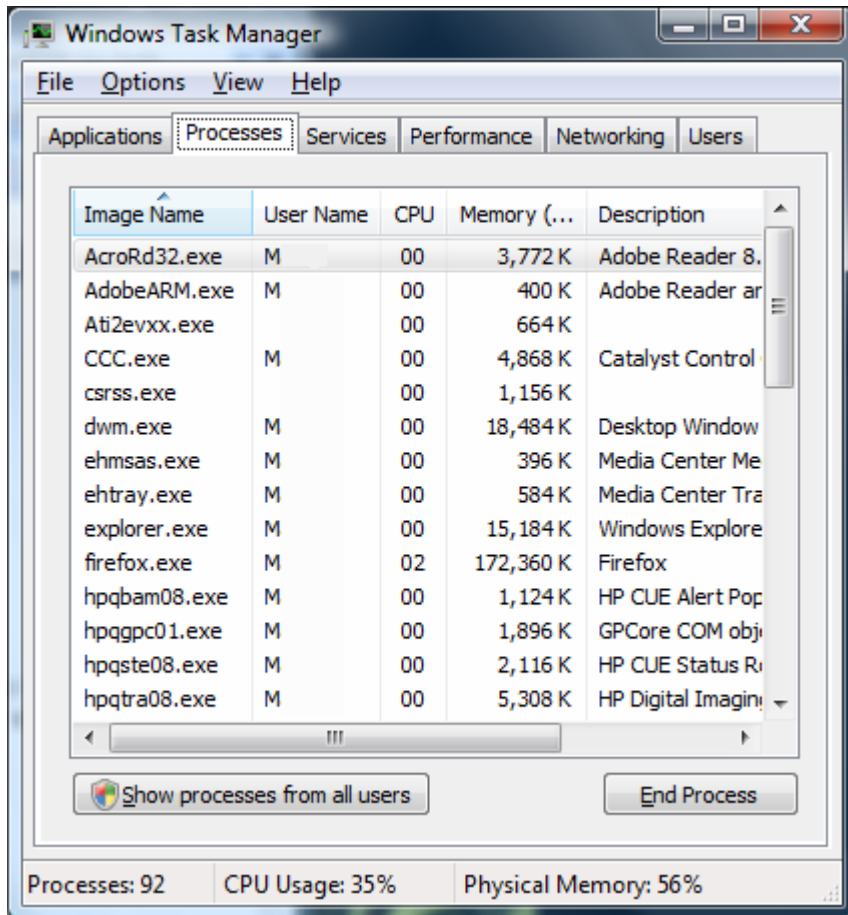
A **Waiting** state is either *Unblocked/Resumed* when the resource becomes available and the state changes to **Ready**, or *Unblocked* to the **Transition** state if the thread is ready to run but still waiting on a resource.

PROCESS MANAGEMENT



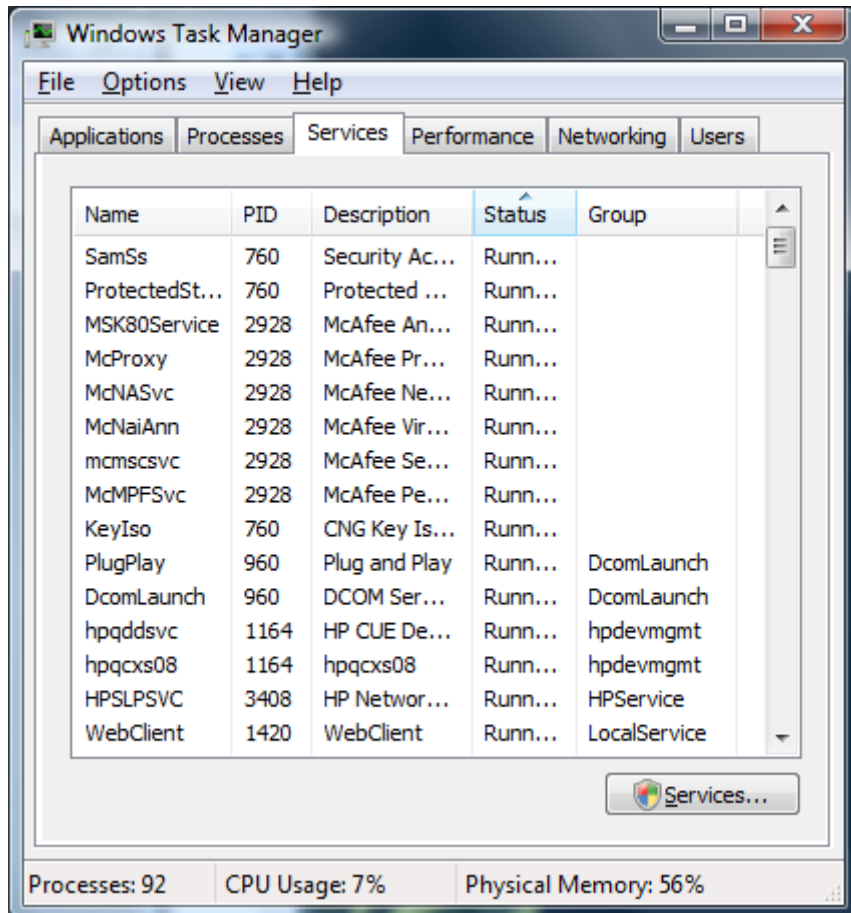
1. If you want to exit a program, select the program and click the *End Task* button.
2. To bring up an open program, select the program and click *Switch To*. The program will pop to the front.
3. To launch a new program, click *New Task...* Then type your command or click *Browse* to locate the application. This function works in the same way as *Run* does in the Start menu.

PROCESS MANAGEMENT



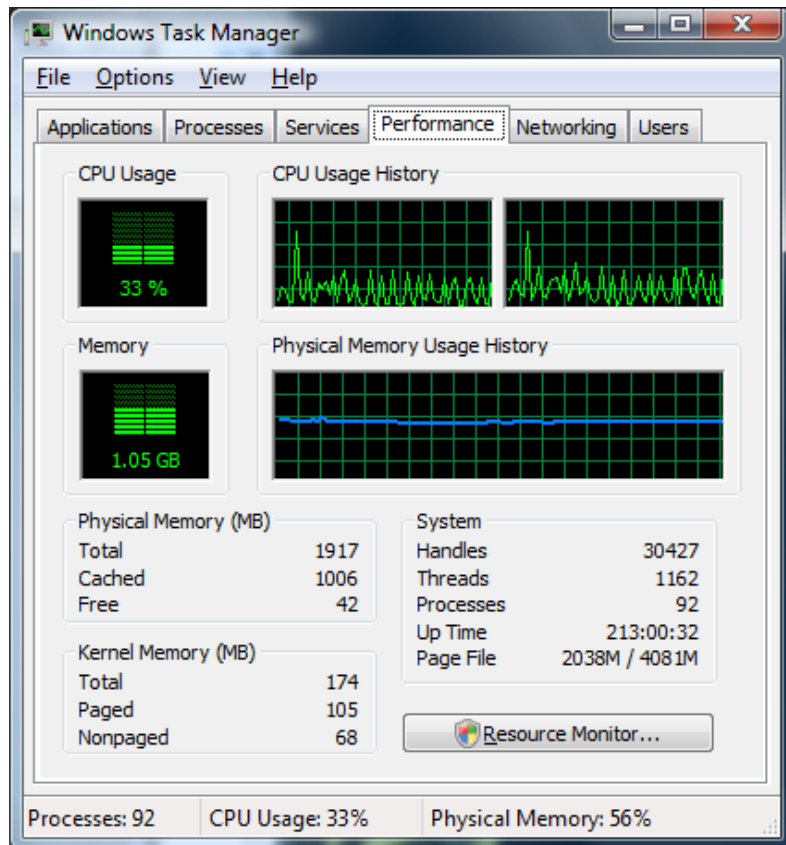
1. To end a highlighted process, click *End Process*. You'll want to terminate an application in this manner when clicking *End Task* in the Applications tab doesn't work.
2. Right-click a process and then click *End Process Tree* to end the process and all associated processes.

PROCESS MANAGEMENT



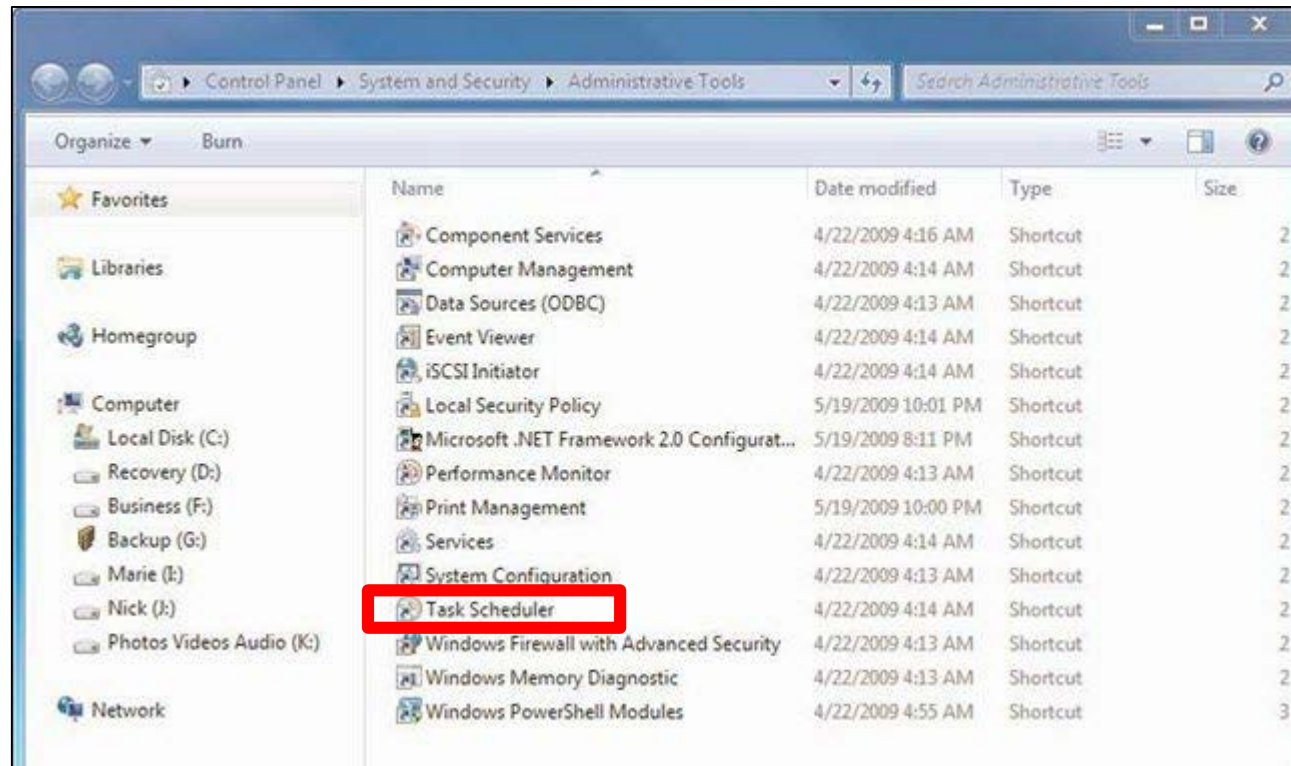
1. To start a service, right-click a stopped service and click *Start Service*.
2. To stop a service, right-click a running service and click *Stop Service*.
3. To view the process associated with a service, right-click a running service and click *Go To Process*. Doing this allows you to find out whether a service is hogging resources.

PROCESS MANAGEMENT

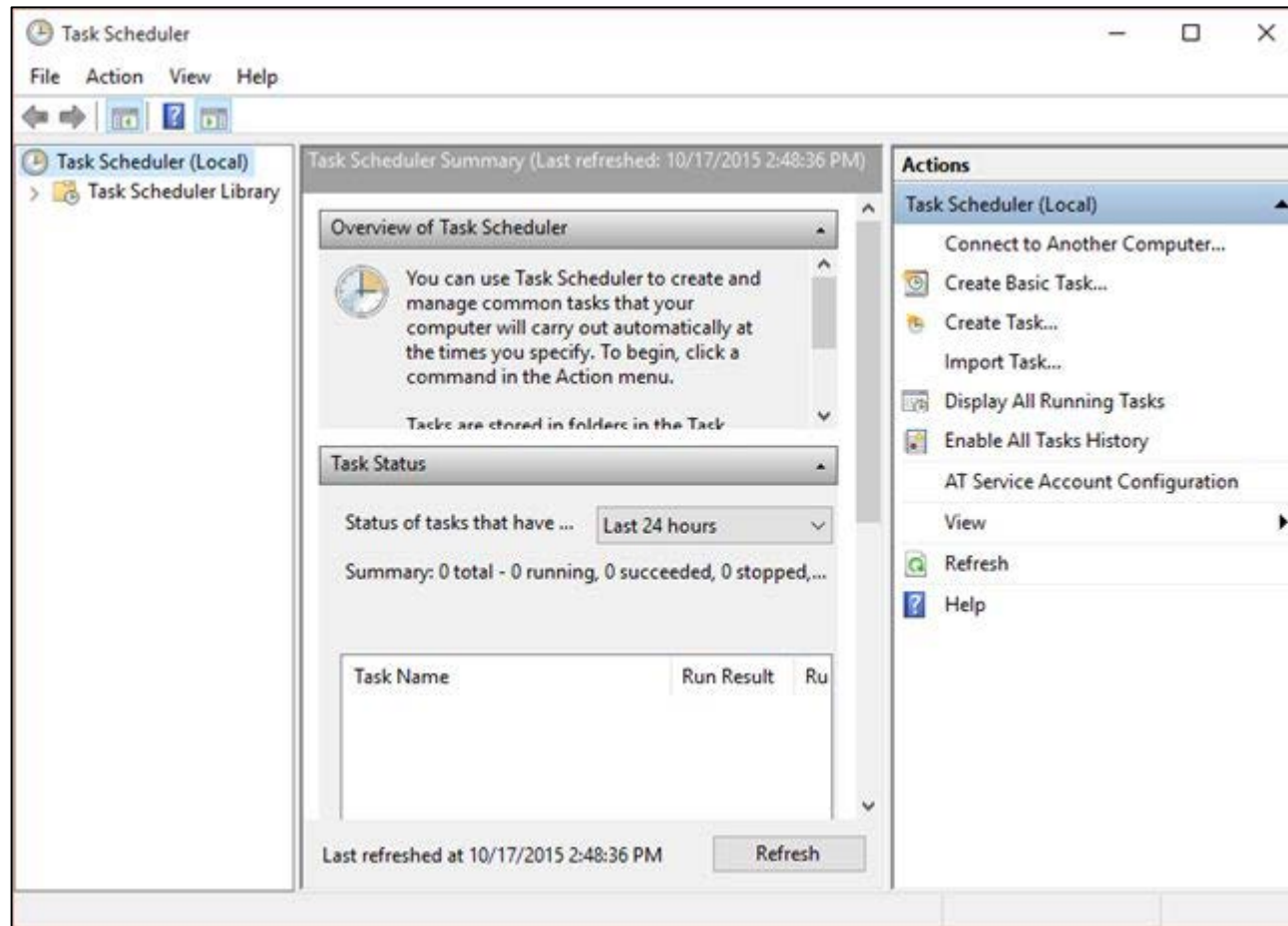


1. At the top you'll find a CPU usage meter and a CPU usage history line graph. Multiple graphs indicate multiple CPU cores.
2. Below the CPU usage meter and CPU usage history line graph, you'll see a similar meter and graph for physical memory usage.
3. At the bottom are various statistics on the number of handles, threads, and processes running as well as on memory usage.

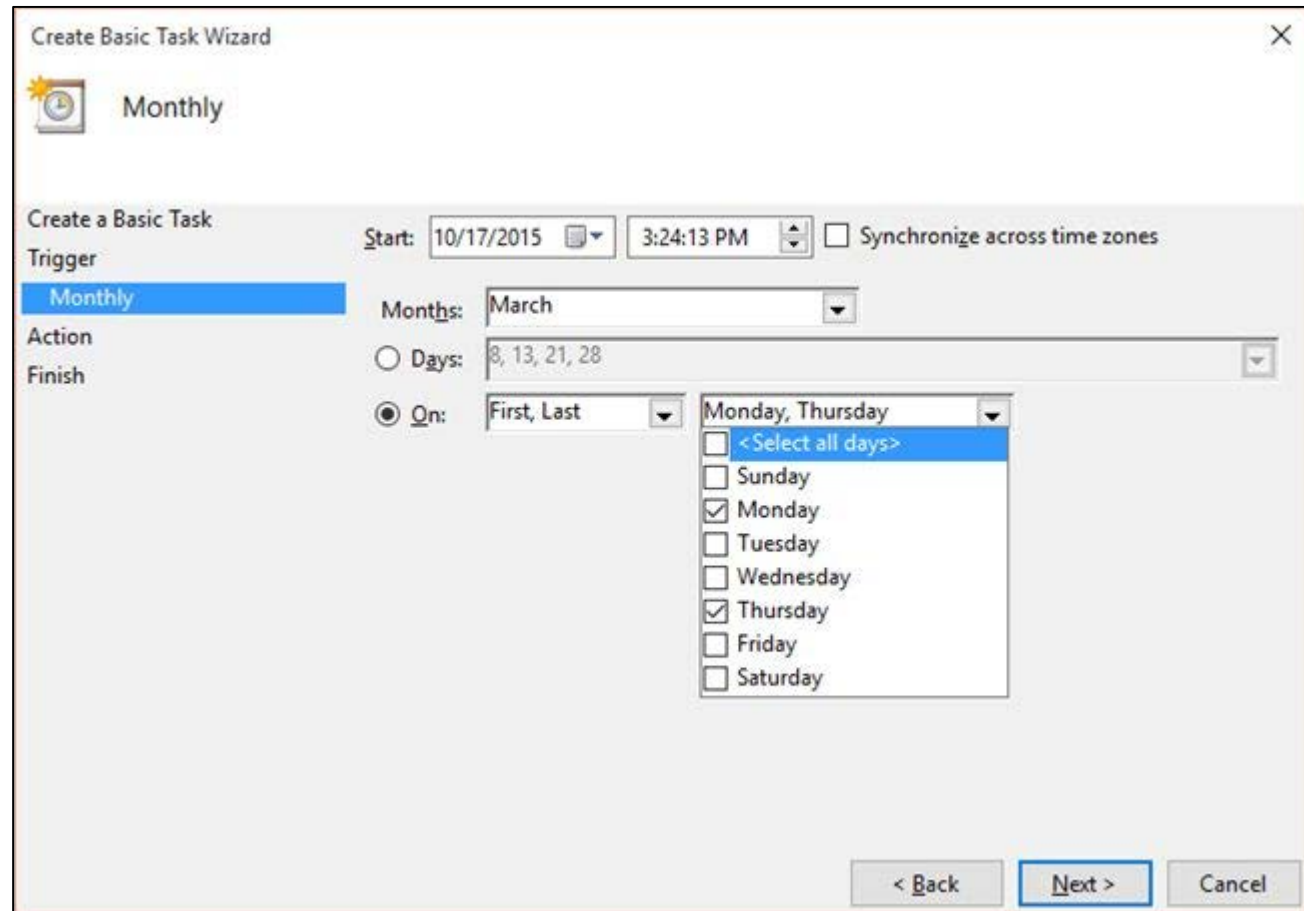
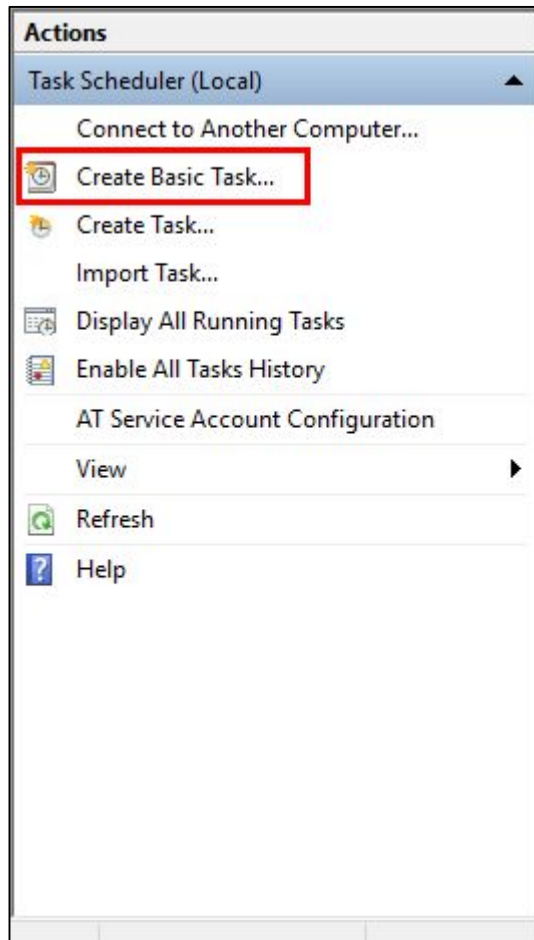
PROCESS MANAGEMENT



PROCESS MANAGEMENT




PROCESS MANAGEMENT



PROCESS MANAGEMENT

Create Basic Task Wizard

 Start a Program

Create a Basic Task

Trigger

Monthly

Action

Start a Program

Finish

Program/script:

C:\Windows\System32\cleanmgr.exe

Browse...

Add arguments (optional):

Start in (optional):

< Back Next > Cancel

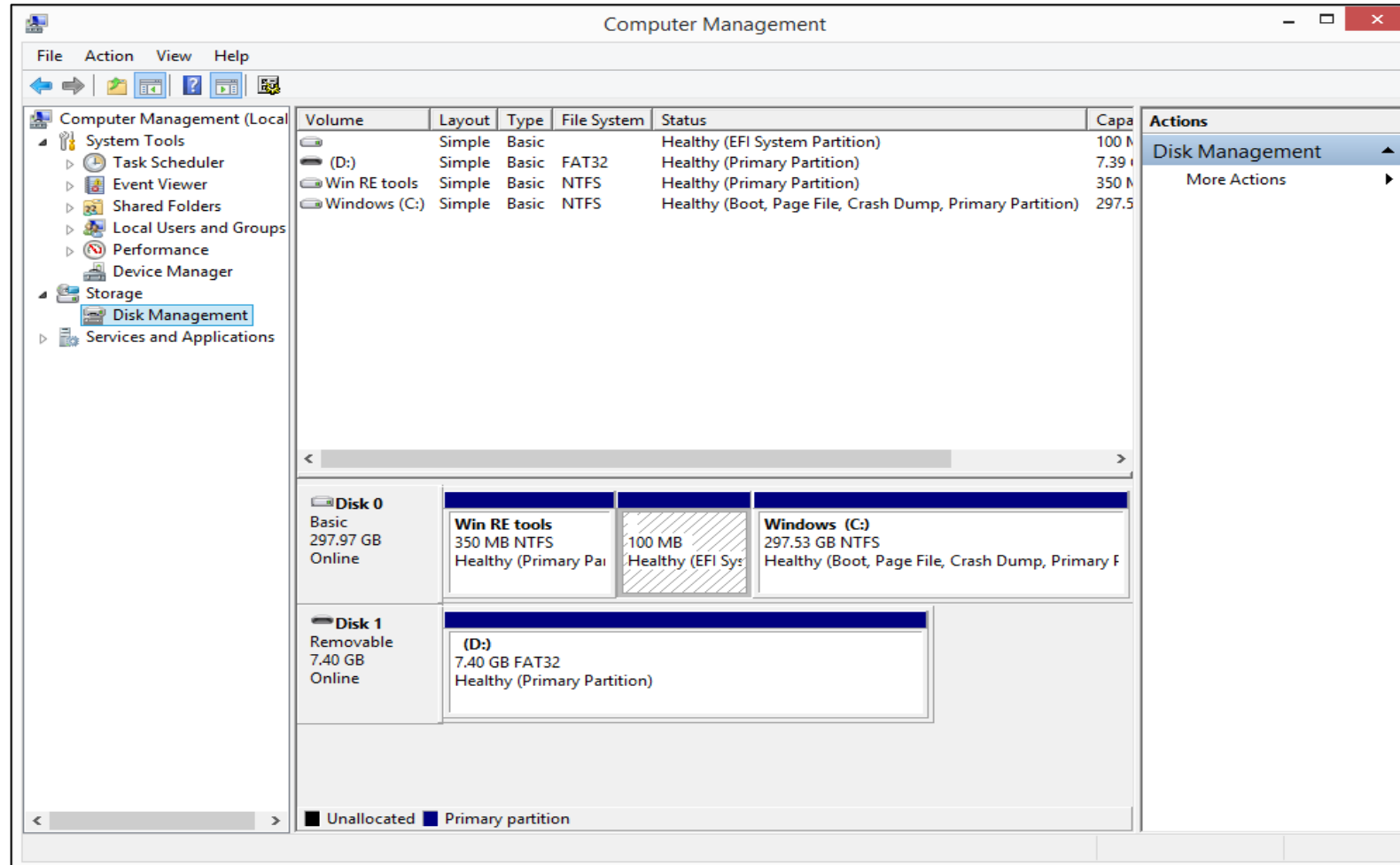
PROCESS MANAGEMENT

TASKLIST – Display all current processes

START – Start a program/process

TASKKILL – Remove a program/process

DISK MANAGEMENT



DISK MANAGEMENT

Disk 0 Basic 111.79 GB Online	System Reserved 500 MB NTFS Healthy (System, Activ	(C:) 111.30 GB NTFS Healthy (Boot, Page File, Crash Dump, Primar
	(D:) 881.51 GB NTFS Healthy (Primary Partition)	50.00 GB Unallocated

The screenshot shows the Windows Disk Management interface. A context menu is open over the 50.00 GB unallocated space on Disk 1. The menu options are: New Simple Volume..., New Spanned Volume..., New Striped Volume..., Properties, and Help. A red arrow points to the 'New Simple Volume...' option. A legend at the bottom indicates that black represents 'Unallocated' and blue represents 'Primary partition'.

Disk 0 Basic 111.79 GB Online	System Reserved 500 MB NTFS Healthy (System, Activ	(C:) 111.30 GB NTFS Healthy (Boot, Page File, Crash Dump, Primar
Disk 1 Basic 931.51 GB Online	(D:) 881.51 GB NTFS Healthy (Primary Partition)	50.00 GB Unallocated

- New Simple Volume...
- New Spanned Volume...
- New Striped Volume...
- Properties
- Help

■ Unallocated ■ Primary partition

DISK MANAGEMENT

New Simple Volume Wizard ✕

Specify Volume Size
Choose a volume size that is between the maximum and minimum sizes.

Maximum disk space in MB: 51199

Minimum disk space in MB: 8

Simple volume size in MB:

< Back **Next >** Cancel

New Simple Volume Wizard ✕

Assign Drive Letter or Path
For easier access, you can assign a drive letter or drive path to your partition.

☒ Assign the following drive letter:

☐ Mount in the following empty NTFS folder:

☐ Do not assign a drive letter or drive path

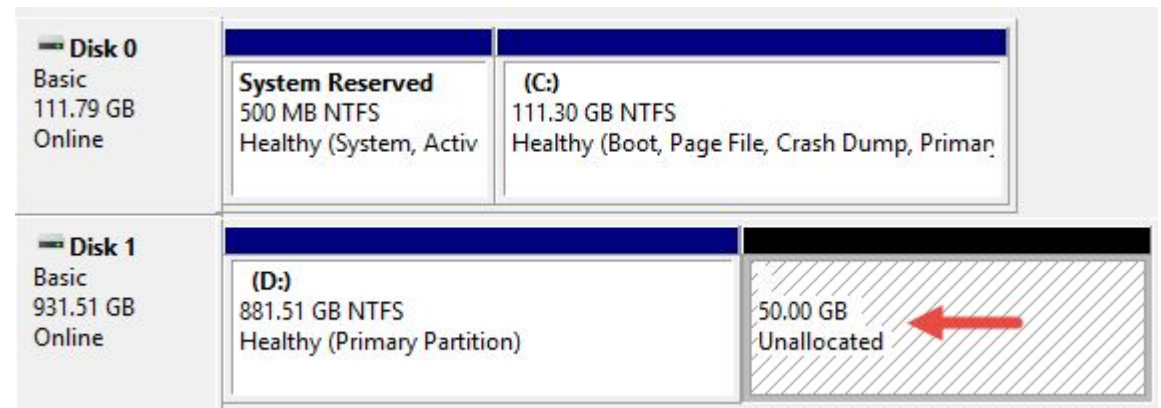
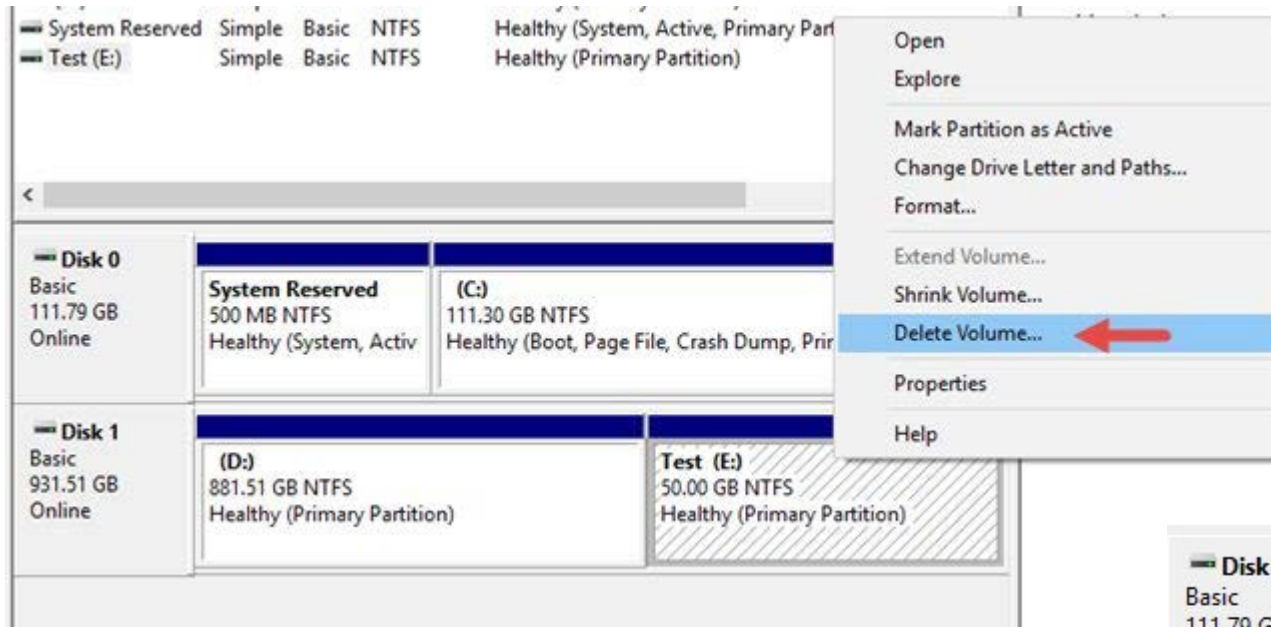
< Back **Next >** Cancel

DISK MANAGEMENT

Disk 0 Basic 111.79 GB Online		
	System Reserved 500 MB NTFS Healthy (System, Activ	(C:) 111.30 GB NTFS Healthy (Boot, Page File, Crash Dump, Primar
Disk 1 Basic 931.51 GB Online		
	(D:) 881.51 GB NTFS Healthy (Primary Partition)	Test (E:) 50.00 GB Formatting ←

Disk 0 Basic 111.79 GB Online		
	System Reserved 500 MB NTFS Healthy (System, Activ	(C:) 111.30 GB NTFS Healthy (Boot, Page File, Crash Dump, Primar
Disk 1 Basic 931.51 GB Online		
	(D:) 881.51 GB NTFS Healthy (Primary Partition)	Test (E:) 50.00 GB NTFS Healthy (Primary Partition) ←

DISK MANAGEMENT



DISK MANAGEMENT

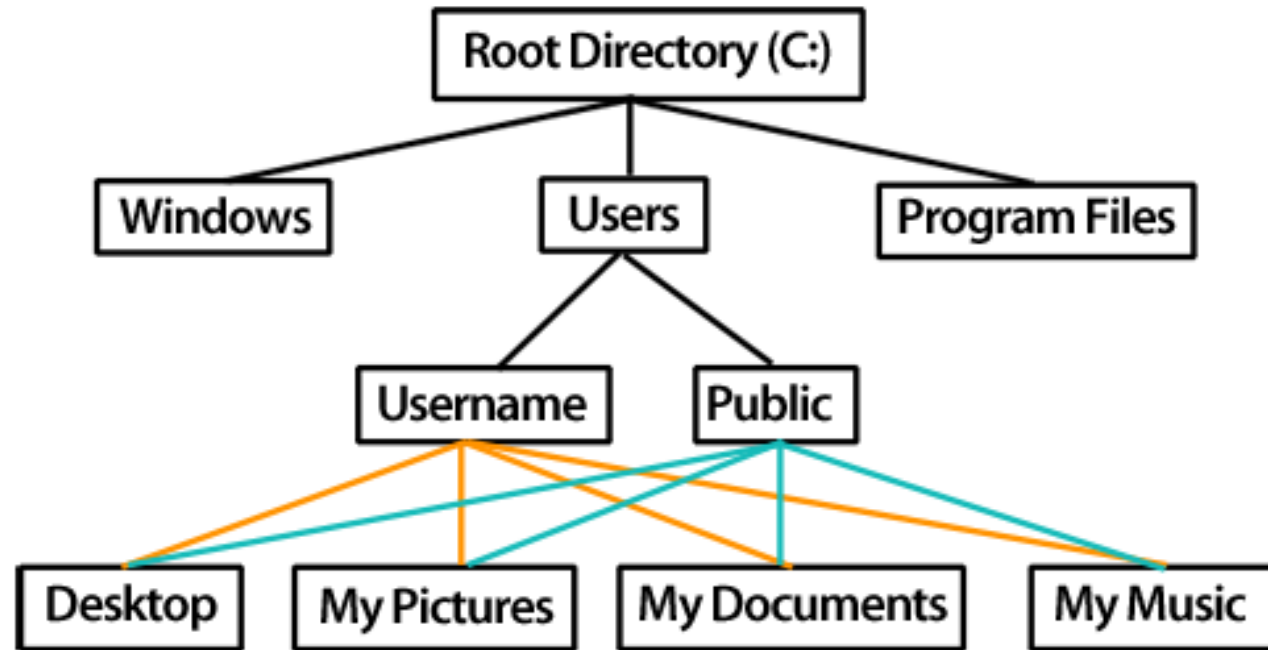
DISKPART – Display/create/delete disk partitions

FORMAT – Erase all contents from the file system

CHKDSK - Allows us of display status report

- Correct file system problems
- Damaged/malfunctioning sectors

FILE MANAGEMENT



FILE MANAGEMENT

- Uses NTFS File System
- Program Files
 - Store 64 bit applications
- Program Files (x86)
 - Store 32 and 16 bit applications
- Users
 - User profiles, documents, application data/settings, cookies
- Windows
 - Windows itself is installed into this folder.
 - Store dynamic-link library (DLL) files that implement the core features of Windows and Windows API.

FILE MANAGEMENT

ATTRIB - Displays or changes file attributes.

MD, MKDIR - Creates a directory.

CD, CHDIR - Displays the name of or changes the current directory.

RMDIR - Removes a directory.

RD - Removes a directory.

DIR - Displays a list of files and subdirectories in a directory.

TREE - Graphically displays the directory structure of a drive or path.

FILE MANAGEMENT

COPY - Copies one or more files to another location.

XCOPY - Copies files and directory trees.

MOVE - Moves one or more files from one directory to another directory.

REPLACE - Replaces files.

REN, RENAME - Renames a file or files.

DEL - Deletes one or more files.

ERASE - Deletes one or more files.

ACCOUNT MANAGEMENT

Administrators have full control over the system. They can install software programs and hardware drivers, and they can create and modify new users and groups. Additionally, they can reset passwords, set policies, and edit the Registry. The OS identifies tasks that require administrator permissions with a Windows security icon.

Standard users are permitted to log on to the computer, run programs, customize their accounts, and save files in their user folders. Users are restricted from making systemwide changes.

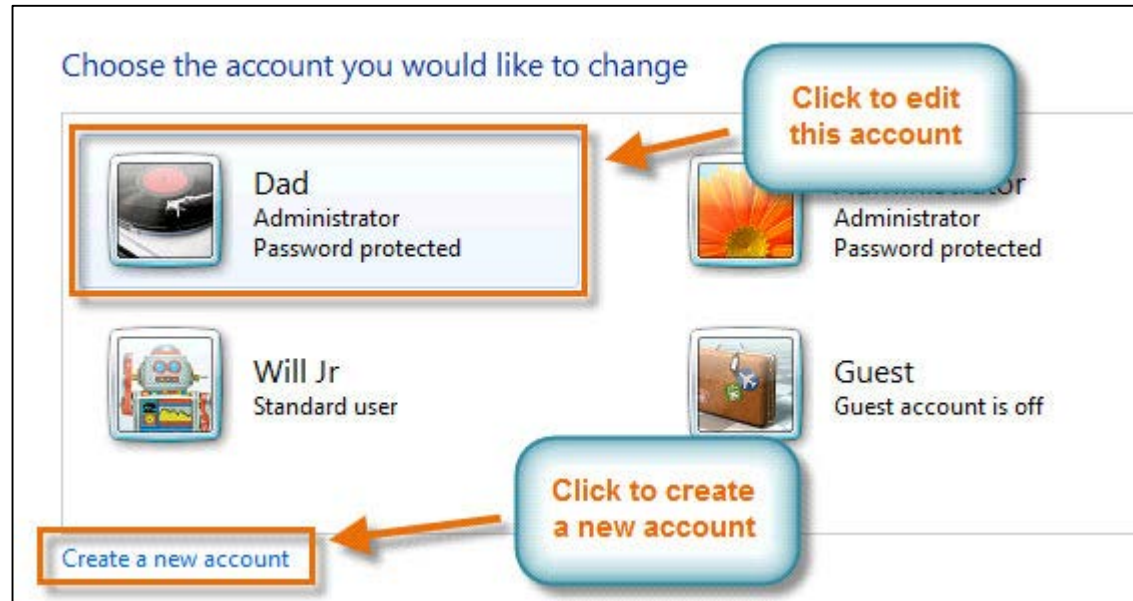
When Windows first installs, it asks you for a user name and password, which it then uses to create your first account. This account joins the Administrators group, which has the highest set of privileges. From this account you can create and manage all other user accounts.

ACCOUNT MANAGEMENT



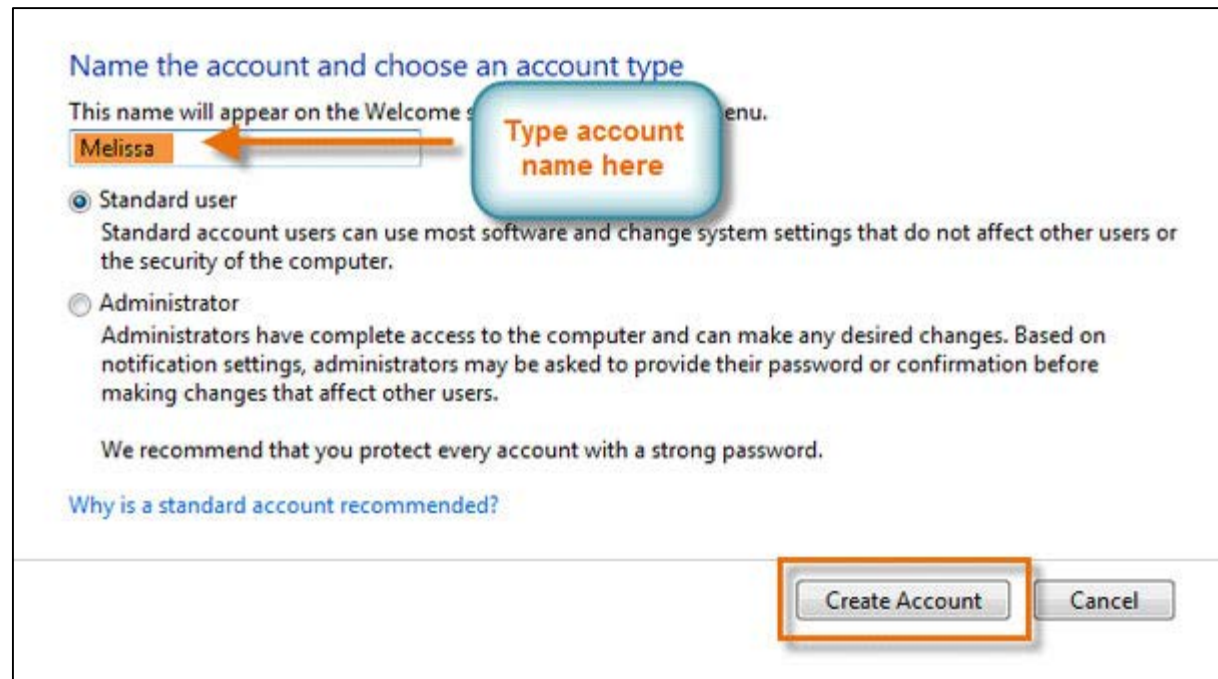
1. Go to the **Control Panel** from the **Start Menu**.
2. Click **Add or remove user accounts**.

ACCOUNT MANAGEMENT



1. The **Manage Accounts** pane will appear. You will see all of the user accounts here, and you can add more accounts or manage existing ones.

ACCOUNT MANAGEMENT



Name the account and choose an account type

This name will appear on the Welcome screen.

Melissa

Type account name here

☒ Standard user
Standard account users can use most software and change system settings that do not affect other users or the security of the computer.

☐ Administrator
Administrators have complete access to the computer and can make any desired changes. Based on notification settings, administrators may be asked to provide their password or confirmation before making changes that affect other users.

We recommend that you protect every account with a strong password.

[Why is a standard account recommended?](#)

Create Account Cancel

1. From the **Manage Accounts** pane, click **Create a new account**.
2. Type an **account name**.
3. Select **Standard user** or **Administrator**.
4. Click **Create Account**.

ACCOUNT MANAGEMENT



1. From the **Manage Accounts** pane, click the account name or picture.

ACCOUNT MANAGEMENT

Make changes to Will Jr's account

- Change the account name
- Create a password** ←
- Change the picture
- Set up Parental Controls
- Change the account type
- Delete the account
- Manage another account

Click **Create a password**

You are creating a password for Will Jr.

If you do this, Will Jr will lose all EFS-encrypted files, personal certificates and stored passwords for Web sites or network resources.

To avoid losing data in the future, ask Will Jr to make a password reset floppy disk.

If the password contains capital letters, they must be typed the same way every time.

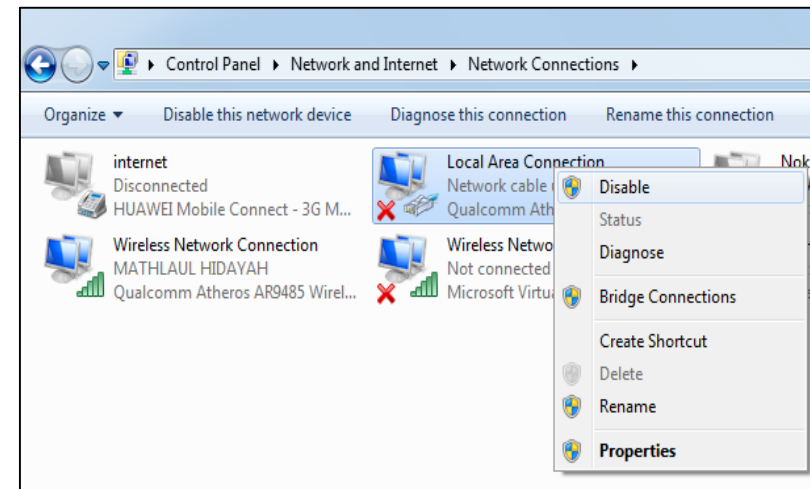
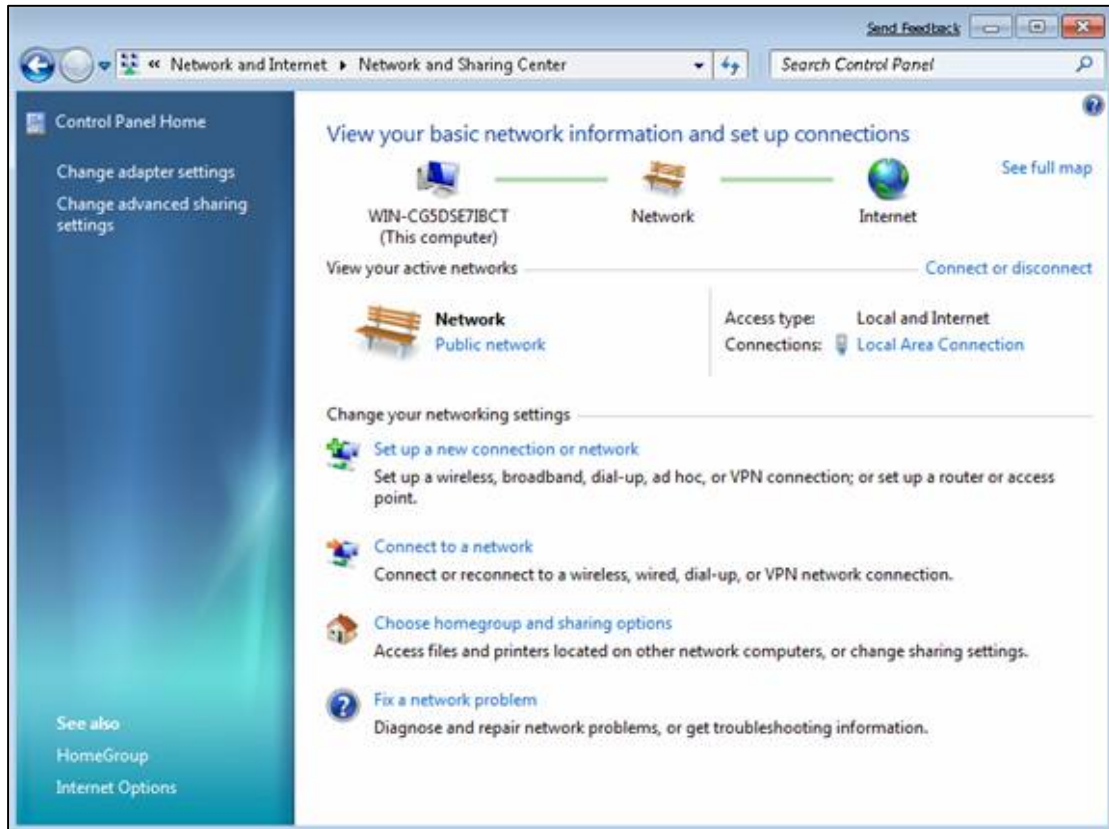
[How to create a strong password](#)

The password hint will be visible to everyone who uses this computer.

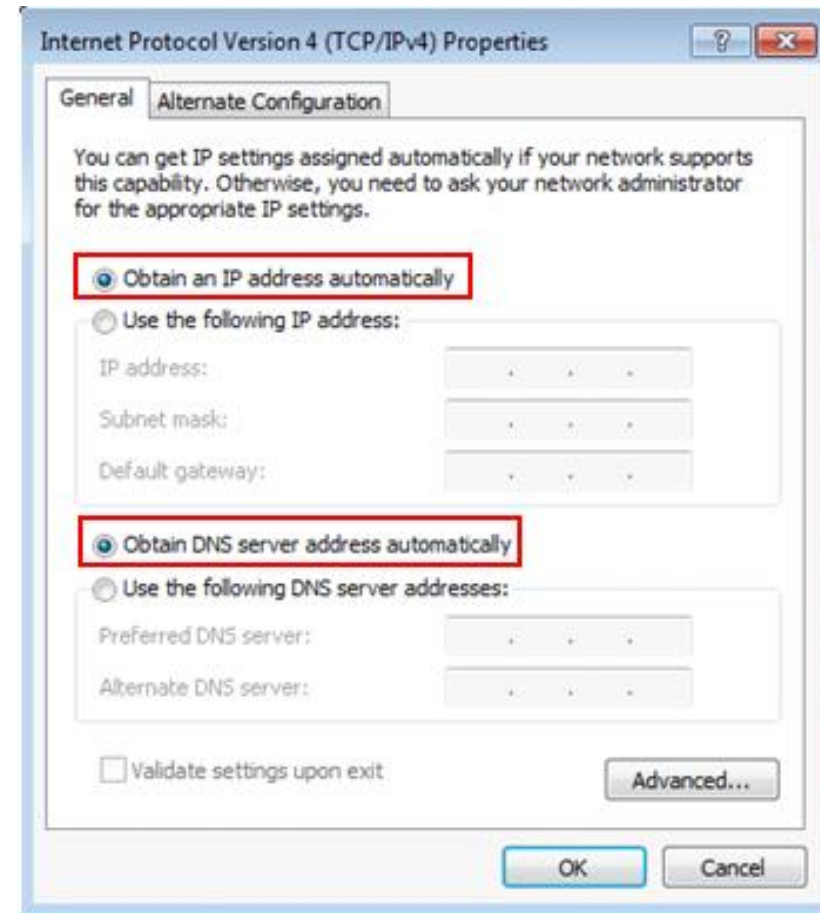
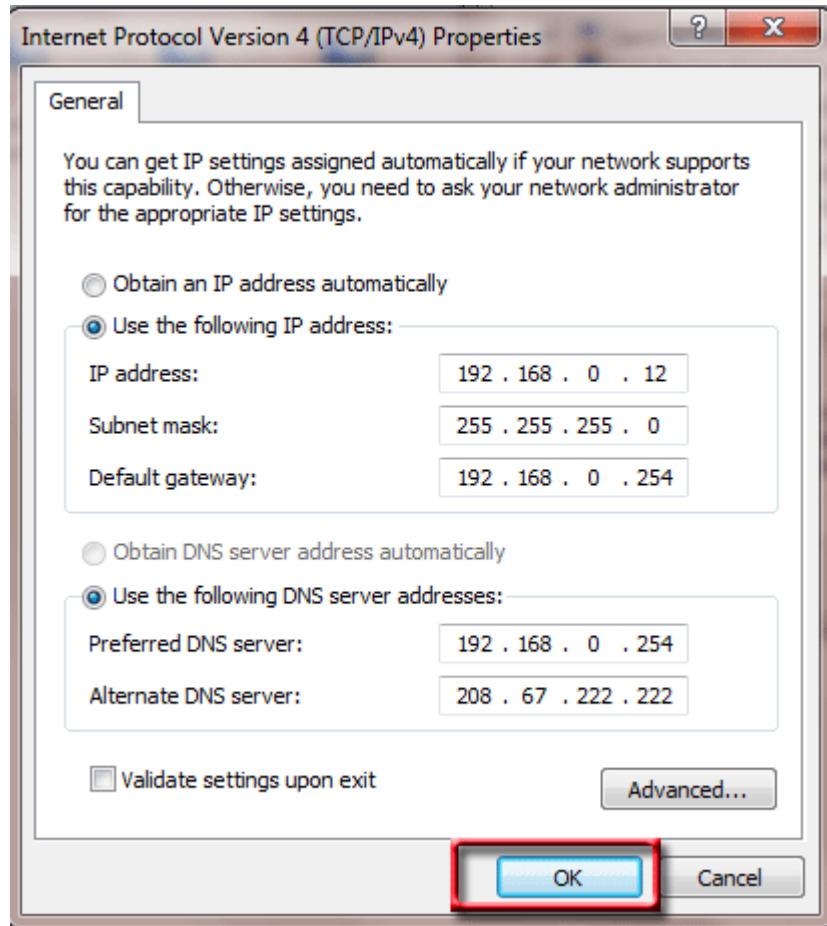
[What is a password hint?](#)

Type a password in the **New password** field, and retype it in the **Confirm new password** field.

NETWORK MANAGEMENT



NETWORK MANAGEMENT



NETWORK MANAGEMENT

IPCONFIG – Check networking settings

NETSTAT - Displays active TCP connections, ports on which the computer is listening, Ethernet statistics, the IP routing table

TRACERT - visually see a network packet being sent and received and the amount of hops required

PING - Helps in determining TCP/IP Networks IP address as well as determine issues with the network and assists in resolving them.

TELNET - Telnet is software that allows users to remotely access another computer such as a server, network device, or other computer.

NETWORK MANAGEMENT

FTP - FTP is short for File Transfer Protocol, this page contains additional information about the FTP command and help using that command in Unix and MS-DOS (Windows).

ARP - Displays, adds, and removes arp information from network devices.

NSLOOKUP - Displays information that you can use to diagnose Domain Name System (DNS) infrastructure.