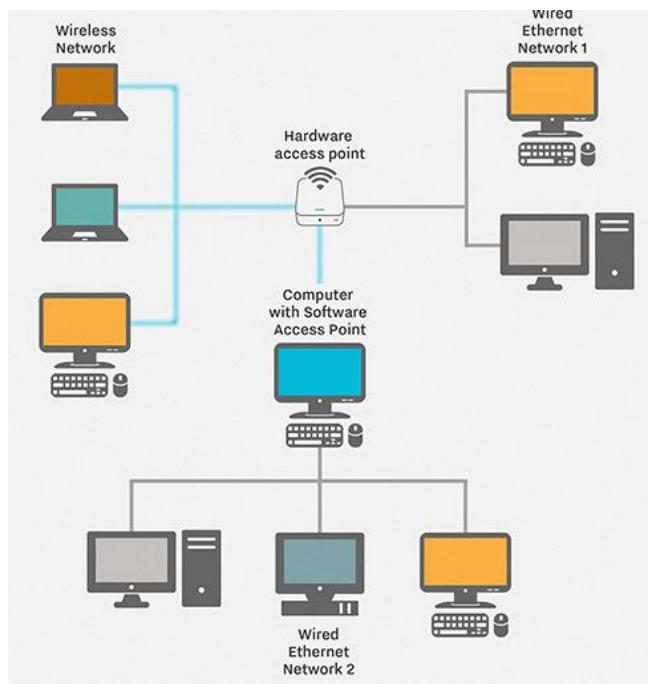


## **Networks: LAN (Local Area Network)**

## Description

A LAN or a local area network is a group of computers or devices which share a common communication link to a server. Typically, a local area network covers a distinct geographic area (such as an office or commercial building) with all its computers and peripherals included.



## Software requirements

- Network software (such as Hamachi or Ping)
  - Security Protocols (Encryption and firewall)

## Hardware requirements

- Network adapter
  - Network medium
  - Cable connectors
  - Power supply
  - Hub/Switch/Router

## Advantages

- **Speed** of data transfer between users in a LAN is significantly faster than wireless
  - Local networks are generally very **stable** and do not require much maintenance if configured properly

- LANs are relatively **inexpensive** to install and maintain
- LANs can be extremely **secure** from external threats as it does not need to be connected to the internet.

### Disadvantages

- Hardware components in LANs have low mobility to move from one area to another. For example, to change computers and devices, cables may need to be added or removed
- For larger LANs, a high capacity server may be required to store and centralize information that are created, transferred and processed by the network. This may add to cost.

### Suitable uses of LAN

- In small, enclosed and localized areas such as home or offices where data can be accessed by all devices directly
- Areas which demand high rate of data transfer (such as gaming)

### Reference

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