

Differentiate between infrastructure mode and the ad hoc mode of IEEE 802.11

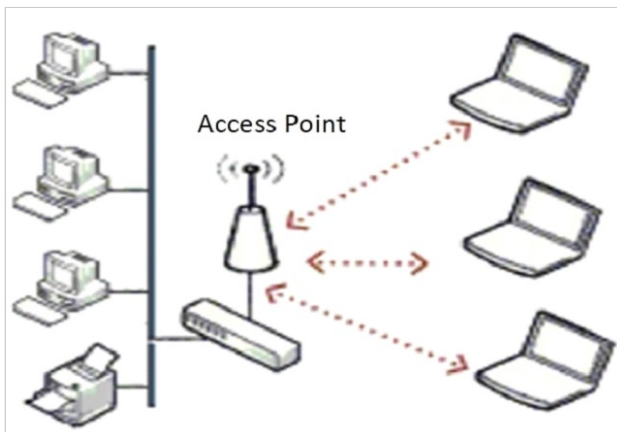
Computer Network Internet MCA

802.11 architecture uses two types of modes, which are as follows –

Infrastructure Mode

The most popular mode used to connect clients like laptops and smartphones to another network such as company intranet or internet.

This mode is shown below –

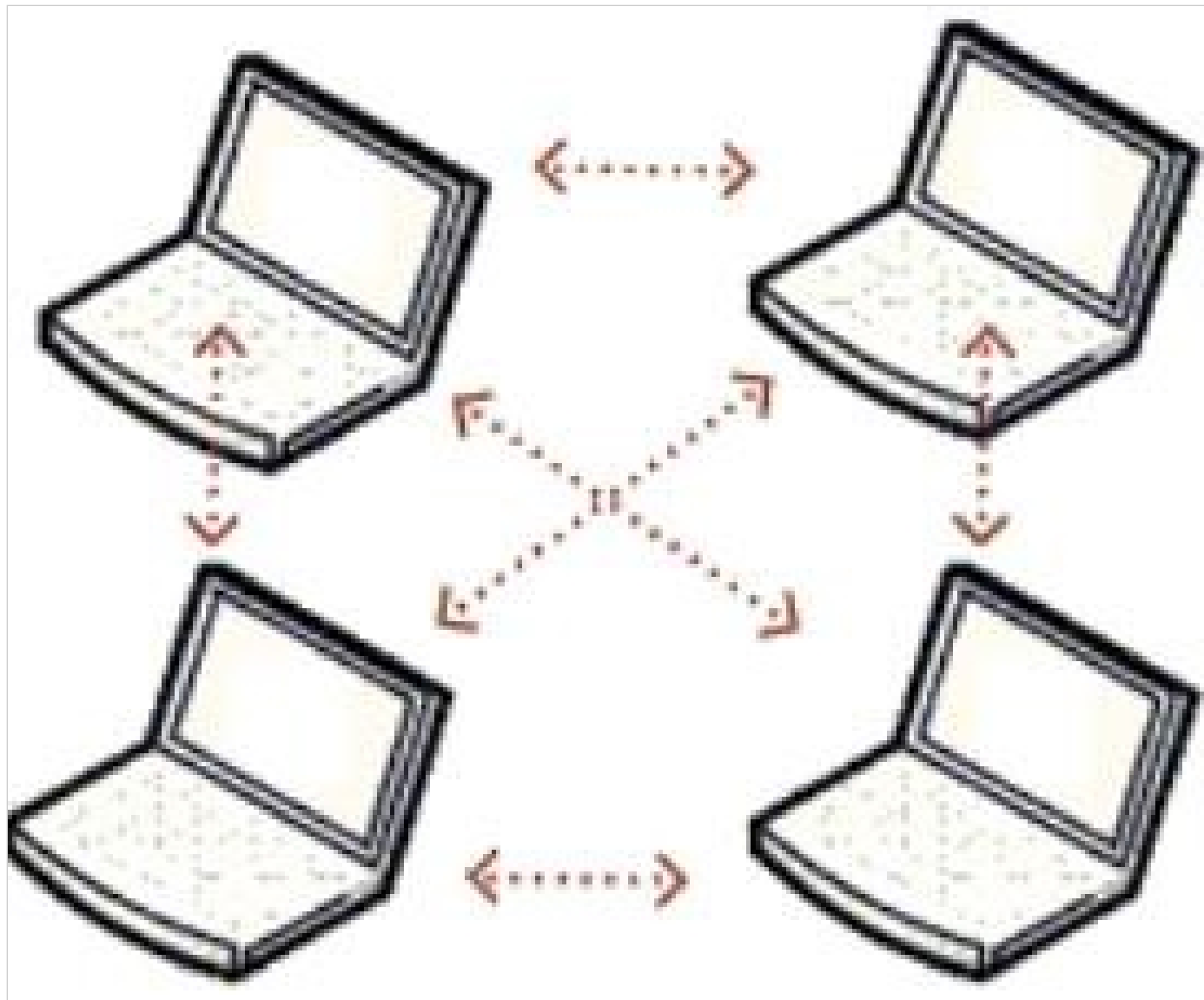


In infrastructure mode every client is associated with an Access point which is in turn connected to another network. The client sends and receives its packet via Access Point.

Ad-Hoc Mode

Collections of computers are associated so that they can directly send frames to each other. There is no Access Point in Ad hoc, because Internet access is the killer application for wireless. Ad hoc networks are not very popular.

This mode is shown below –



Differences

The major differences between Infrastructure and ad hoc mode are as follows –

Infrastructure mode	ad hoc mode
In this mode, the transmitter and receivers are in direct range of the access point (AP).	In the ad hoc mode transmitter and receivers can communicate directly with each other.
In this mode AP handles all wireless nodes within the range.	In ad hoc mode there is no need for an access point in the range.
In this mode each client's security setting must be configured to match the security setting of the access point (AP).	Since in ad hoc mode there is no AP, the network users have to configure what are the correct security settings and it must have to match with each client's security settings in the network.
In this mode, a client or a system can only communicate with connected clients in managed mode.	Since ad hoc is peer to peer mode with no central access point, it also allows internet between any two connected clients.
More widely used. Generally used at airport lounge, hotel lobby, railway station etc.	Most of the IEEE 802.11 transmitter and receivers support the ad hoc mode. Generally used in the Military arena (for sharing

Infrastructure mode	ad hoc mode
	information among soldiers),local area networks for communication among a fixed group of people etc.