Learn about basic WLAN devices

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In this article, readers will be familiar with basic WLAN devices.Basic WLAN devices include wireless network cards, wireless access points (*Access Points*), and WBridge (Wireless Bridge).

Wireless network card

Wireless network cards communicate computers with wireless networks by modulating data signals with a spread spectrum chain and implementing a carrier touch access protocol.The computer wants to send data on the network, the wireless network card will listen to other transmissions.If no other transmissions are found, the network card will generate a data frame.Meanwhile, other stations are constantly listening to incoming data, capturing the broadcast data frame and checking whether its address matches the destination address in the Header of the message frame.If the address matches the address of the station, the station will receive and process the data frame, otherwise the station will discard this data frame.

Wireless network cards are not much different from those used in wired LANs.Wireless network cards exchange information with the network operating system through a dedicated controller.Thus, any application can use

wireless networks to transfer data.However, unlike wired network cards, wireless network cards do not need any wiring.Wired network cards can use ISA slots (currently less used) or PCI slots (commonly used) on desktop computers or use the PCMCIA slot on laptops.Wireless cards often have an external antenna that can be attached to a wall or a location in the room.

Wireless access points (Access Point)

AP (*Acsses Point*) wireless access points create coverage areas, connecting mobile nodes to wired LAN infrastructures.Because access points allow extended coverage, WLAN wireless networks can be deployed in either a building or a university campus, creating a large wireless access area.These access points not only provide information exchange with wired networks but also filter traffic and perform bridging functions with other standards.Filter function helps preserve bandwidth on radio channels by eliminating excess traffic.

Because of the asymmetric pairing bandwidth between wireless and wired information, access points need to have proper buffers and memory resources.Buffers are mainly used to store data points at access points when a mobile node tries to move out of coverage or when a mobile node operates in low power mode.Access points communicate with each other over wired networks to manage mobile nodes.An uncontrolled access point accesses from multiple mobile nodes (which means it can operate with a distributed random protocol like CSMA).However, a centralized multi-access protocol controlled by an access point has many advantages.Common wired network interface options with access points include 10Base2, 10BaseT, ADSL modem, ISDN.

WBridge - Wireless Bridge

WBridge (Wireless Bridge) is similar to wireless access points unless they are used for external channels.Depending on distance and region, external antenna is required.WBridge is designed to connect networks together, especially in buildings up to 32 km away.

WBridge provides a fast and inexpensive method of using cable, or leased line (lised-line) and is often used when traditional wired connections cannot be made or difficult as across rivers, rugged terrain, private areas, highways . Unlike cable links and specialized telephone circuits, WBridge can filter traffic and ensure that wireless networks can Good connection without losing necessary traffic.

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