Configuring Wireless LAN Controller/AP Controlller

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This is a small topology where you can see that we have a WLAN controller. When we have a bigger wireless LAN, and more number of access points, we need to use a AP Controller and AP Manager.

This is a small topology where you can see that we have different VLANs available, and we have different access points available, so we need to configure wireless LAN controller separately.

Wireless controllers have different functions that simply network's configuration, such as flexibility to configure wireless policies management and security settings.

When we are looking at commercial aspect, we may use access point controller so that we can have the same SSID and authentication, and manage the entire campus, or entire WiFi network.

Different AP controller software version is available.

One of the good features is wIPS (Wireless Intrusion Prevention System) to prevent intruders from accessing the wireless network. There is a separate feature for QoS (Quality of Service), for voice and video access on wired and wireless networks. There is also Centralized security and also support of IPv6.

How you can install AP manager? When you connect to an AP manager, you first connect that AP manager with a wired PC and then insert that wireless LAN hardware access point installation disk. For example, here is D drive. Go to D: drive and execute Setup.exe file, and then you can start the installation. In the AP manager, you can configure SSID and other parameters.

I am using a Cisco Aironet 1200 series Access Point here. There are different model of APs available.

There is express setup. This is a web browser; it is easier to do the configuration via a web browser by typing the IP address of the AP manager. During the installation process, you can give the IP address to this AP Controller

You need to gather information about the DHCP server and other relevant information of the network.

Once you done that, the next thing is you need to configure things like hostname, IP address, SNMP, etc when you configure the express setup.

After that, you need to go to ‘express security’ tab by providing the security and other parameters.

These are the steps when you are configuring wireless access point (AP) and AP controller:
1. search and identify the DHCP server
2. configure WLC (Wireless LAN Controller),
3. configure different switches and APs .
4. The next stage is AP registration to WLC. Whenever you have several access points, you need to register all access points to wireless LAN controller.

When you have the entire configuration done, this is a summary. You can monitor what are the different devices, what are the access points, their radios and all. Now, this is the statistics, which give you the port details and whether the link is up or down. Once you configure, you can have the statistics of the entire network: such as how many packets are going in and how these ports are connected, and what are the different wireless LANs, what are their SSIDs and all.

You change the SSID anytime. The best practice is that all devices and all access points should have same SSID then the mobility and the handoff between the devices will be better.

You can create VLAN and multiple VLANs, but it is better that everything should be monitored and controlled from the access point controller.

These are the controller options where you can enable and disable the features. If you want to add few devices, click on 'New' and 'Add devices' here. You can configure different VLAN available on the access point once you register Access Point. The AP's hardware details are available to that AP controller.

You can also provide static IP so that you can connect to that particular Access Point and configure them.

The most important part in wireless is selecting the channel, i.e., selecting the radio (RF). Once you select the radio and depending on type of radios, the access point will be functional. The RF selection on the AP must match the network, so you will be able to connect these devices into your network.

This is a summary after configuring.

After completing the configuration, you need to save and reboot the entire system, then it will be functional.