LOMBA KOMPETENSI SISWA
SEKOLAH MENENGAH KEJURUAN
TINGKAT NASIONAL XXVIII 2020
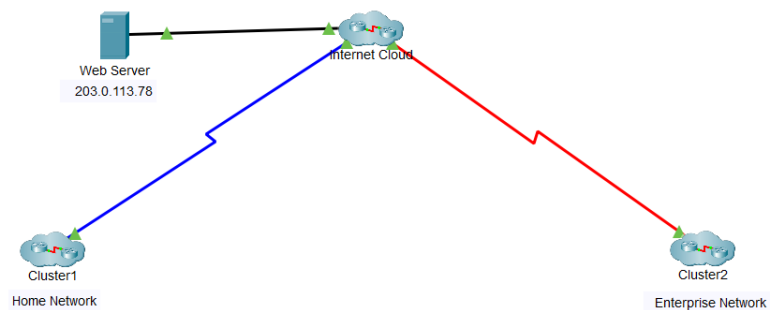

TEST PROJECT

IT NETWORK SYSTEMS ADMINISTRATION
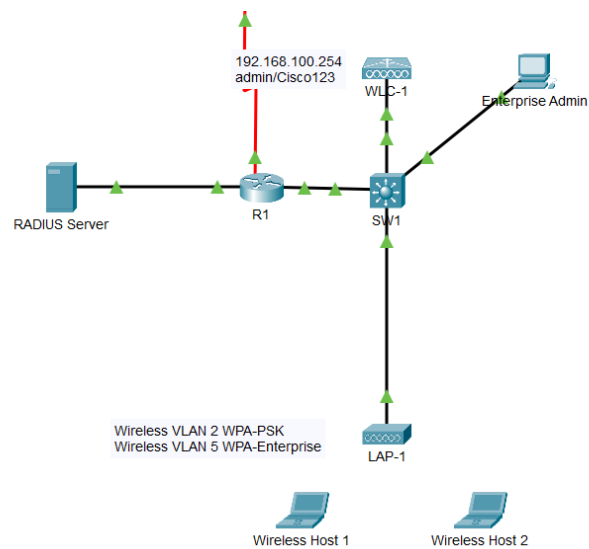
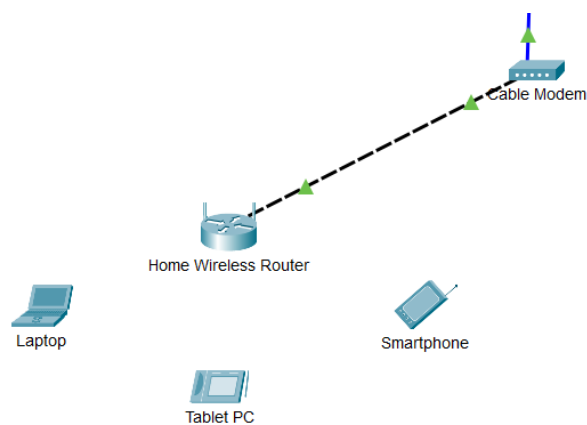## LKS2020_FUTURE NETWORK

Module – Future Network
LKS Nasional 2020 Daring

Web Server
203.0.113.78

Internet Cloud

Cluster1
Home Network

Cluster2
Enterprise Network

Main Topology

192.168.100.254
admin/Cisco123

WLC-1

Enterprise Admin

RADIUS Server

R1

SW1

Wireless VLAN 2 WPA-PSK
Wireless VLAN 5 WPA-Enterprise

LAP-1

Wireless Host 1

Wireless Host 2

Topology Cluster Enterprise Network

Cable Modem

Home Wireless Router

Laptop

Smartphone

Tablet PC

Topology Cluster Home Network

Addressing Table

Device	Interface	IP Address
Home Wireless Router	Internet	DHCP
	LAN	192.168.6.1/27
RTR-1	G0/0/0.2	192.168.2.1/24
	G0/0/0.5	192.168.5.1/24
	G0/0/0.100	192.168.100.1/24
	G0/0/1	10.6.0.1/24
SW1	VLAN 200	192.168.100.100/24
LAP-1	G0	DHCP
WLC-1	Management	192.168.100.254/24
RADIUS Server	NIC	10.6.0.254/24
Home Admin	NIC	DHCP
Enterprise Admin	NIC	192.168.100.200/24
Web Server	NIC	203.0.113.78/24
DNS Server	NIC	10.100.100.252
Laptop	NIC	DHCP
Tablet PC	Wireless0	DHCP
Smartphone	Wireless0	DHCP
Wireless Host 1	Wireless0	DHCP
Wireless Host 2	Wireless0	DHCP

WLAN Information

WLAN	SSID	Authentication	Username	Password
Home Network	HomeSSID	WPA2-Personal	N/A	Cisco123
WLAN VLAN 2	SSID-2	WPA-2 Personal	N/A	Cisco123
WLAN VLAN 5	SSID-5	WPA-2 Enterprise	userWLAN5	userW5pass

Objectives

In this Module, you will configure both a wireless home router and a WLC-based network. You will implement both WPA2-PSK and WPA2-Enterprise security.

Background / Scenario

You will apply your WLAN skills and knowledge by configuring a home wireless router and an enterprise WLC. You will implement both WPA2-PSK and WPA2-Enterprise security. Finally, you will connect hosts to each WLAN and verify connectivity.

Instructions

Configure a Home Wireless Router.

You are installing a new home wireless router at a friend's house. You will need to change settings on the router to enhance security and meet your friend's requirements.

- Change DHCP settings.

- Configure the Wireless LAN.

- Configure security.

- Connect clients to the network.

Configure a WLC Controller Network

Configure the wireless LAN controller with two WLANs. One WLAN will use WPA2-PSK authentication. The other WLAN will use WPA2-Enterprise authentication. You will also configure the WLC to use an SNMP server and configure a DHCP scope that will be used by the wireless management network.

- Configure VLAN interfaces.

- Configure a DHCP scope for the wireless management network.

- Configure the WLC with external server addresses.

- Create the WLANs.

- Configure the hosts to connect to the WLANs.

- Test connectivity.