Module- 02- Assignment-04 – Basic and Advance LAN Security, RIPv2 Routing Protocol, IPAddressing, Network Services, VLAN, EtherChannel (08 Hours)

Devices Name	Interface	Connect with	Interface	User Count	Remark
R-01	Gig 0/0/0	SW-01	Gig 0/1	User 63	
	Gig 0/0/1	SW-02	Gig 0/1	User 150	
	Serial 0/1/0	R-02	Serial 0/1/0	User 02	**DTE**
R-02	Serial 0/1/0	R-01	Serial 0/1/0		DCE
	Serial 0/1/1	R-03	Serial 0/1/1		DCE
	Serial 0/2/0	R-04	Serial 0/2/0		DCE
	Serial 0/2/1	R-05	Serial 0/2/1		DCE
	Gig 0/0/0	SW-03	Gig 0/1		
	-	SW-03-1	-		
R-03	Gig 0/0/0	SW-04	Gig 0/1		
	Gig 0/0/1	SW-05	Gig 0/1	User 15	
	Serial 0/1/1	R-02	Serial 0/1/1	User 02	**DTE**
R-04	Gig 0/0/0	SW-06	Gig 0/1	User 45	
	Gig 0/0/1	SW-07	Gig 0/1	User 70	
	Serial 0/2/0	R-02	Serial 0/2/0	User 02	**DTE**
R-05	Gig 0/0/0	SW-08	Gig 0/1	User 80	
	Gig 0/0/1	SW-09	Gig 0/1	User 1900	
	Serial 0/2/1	R-02	Serial 0/2/1	User 02	**DTE**
Amanda-PC	Fa 0	SW-01	Fa 0/1		Amanda Perera
Kasun-PC	Fa 0	SW-01	Fa 0/2		Kasun Jayakody
Dilshan-PC	Fa 0	SW-02	Fa 0/1		Dilshan Herath
Pradeep-PC	Fa 0	SW-02	Fa 0/2		Pradeep Rajapaksha
Lankika-PC	Fa 0	SW-04	Fa 0/1		Lankika Jayathunga
Prabodha-PC	Fa 0	SW-04	Fa 0/2		Prabodha Silva
Gayan-PC	Fa 0	SW-05	Fa 0/1		Gayan Samarasingha
Visura-PC	Fa 0	SW-05	Fa 0/2		Visura Peris
Nayantha-PC	Fa 0	SW-06	Fa 0/1		Nayantha Maleesha
Udara-PC	Fa 0	SW-06	Fa 0/2		Udara Kaushalya
Nadeeka-PC	Fa 0	SW-07	Fa 0/1		Nadeeka Jayasooriya
Binal-PC	Fa 0	SW-07	Fa 0/2		Binal Perera
Hiran-PC	Fa 0	SW-08	Fa 0/1		Hiran Peris
Lahiru-PC	Fa 0	SW-08	Fa 0/2		Lahiru Dias
Web /DHCP	Fa 0	SW-09	Fa 0/1		
DNS/ Email	Fa 0	SW-09	Fa 0/2		

01. Using VLSM Method and Finding IP Address. As well as every **GigabytEthernet** Interface and Every **Serial DCE** ports are using **their Highest IP** address.

02. Basic Configuration (**Every Router**).

i. Set date and time for **every network** device.

ii. Set Banner message

```
##################################################
    This is Secure area. Please enter your  Authentication.
##################################################
```

iii. Password:

Enable Secret: **Your Name with @2024.lk (First Letter Capital)**
Console Password: **Your Name with @2024.lk(Second Letter Capital)**

SSH Configuration

Username: Admin
Secret:
yournameFirst@SlTsc.lk
RSA Crypto key Module: **1028**
Domain-name: **sltsc.lk**

03. Every password **must** be Encrypted.
04. Password minimum length is **08** digits.
05. Blocking Brute-force attack
    Failed Attempts - 02
    Within - 01minits
    Blockfor - 15minits

06. Create a web site to web server as a Sri Lanka Technological School of Computing. Its domain name **www.sltsc.lk** well as everyuser canaccess the web site.

07. Create anemail server for all clients and their password is Mail@123. All users have the same email password, and their email address is following like this.
    Eg :- Binal@sltsc.lk

08. Every remote session and console session's time duration is 10 minutes.
09. DNSserver IP address is their Second Lowest address and WEB Server for use Third Lowest address.
10. Save every network device configuration tothe TFTP server. Use DNSIP address for TFTP.
11. Router-03 Switch 04 has a VLAN Configuration. (Implement VLAN security and allow all Default VLAN and data VLAN trough trunk port)

VLAN-02	LAB-01	1-5	USERS 40
VLAN-03	LAB-02	6-10	USERS 80
VLAN-04	LAB-02	11-15	USERS 50

12. Implement RIPv2 route.
13. Shutdown every unwanted port. And implement static MAC Filtering.

14. Established between SW-03 and SW-03-1 to Ether-channel.

SW 03	SW 03-1	Channel No	Channel Method
Fa 0/20, Fa0/21	Fa 0/20, Fa0/21	01	LACP
Fa 0/22, Fa0/23	Fa 0/22, Fa0/23	02	LACP

15. Root Bridge must be a not a current one.