Module -03-Final Activity – Basic and Advance LAN Security, RIPv2, IP Addressing, Network Services, VLAN, EtherChannel, ACL, VPN-GRE, NTP and Syslog (08 Hours) 2024.10.05

Devices Name	Interface	Connect with	Interface	User Count	Remark
C-01	Gig 0/0/0	SW-01	Gig 0/1	User 65	
	Gig 0/0/1	SW-02	Gig 0/1	User 20	
	Serial 0/1/0	C-02	Serial 0/1/0	User 02	DTE
C-02	Serial 0/1/0	C-01	Serial 0/1/0		DCE
	Serial 0/1/1	CBR	Serial 0/1/1		DCE
	Gig 0/0/0	SW-03	Ether Channel	User 150	
	-	SW-03-1	Ether Channel		
CBR	Gig 0/0/0	SW-04	Gig 0/1	V2 LAB-01	User 15
				V3 LAB-02	User 20
				V4 LAB-03	User 10
	Gig 0/0/1	SW-05	Gig 0/1	User 10	
	Serial 0/1/1	C-02	Serial 0/1/1	User 02	DTE
	Serial 0/1/0	ISP	Serial 0/1/0	100.100.10.2	DTE
KBR	Gig 0/0/0	SW-06	Gig 0/1	User 60	
	Gig 0/0/1	SW-07	Gig 0/1	User 100	
	Serial 0/1/1	ISP	Serial 0/1/1	100.100.10.6	DTE
GBR	Gig 0/0/0	SW-08	Gig 0/1	User 120	
	Gig 0/0/1	SW-09	Gig 0/1	User 210	
	Serial 0/2/0	ISP	Serial 0/2/0	100.100.10.10	DTE
ISP	Serial 0/1/0	CBR	Serial 0/1/0	100.100.10.1	DCE
	Serial 0/1/1	KBR	Serial 0/1/1	100.100.10.5	DCE
	Serial 0/2/0	GBR	Serial 0/2/0	100.100.10.9	DCE
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
Rangana-PC	Fa 0	SW-03	Fa 0/1		Rangana Herath
Supun-PC	Fa 0	SW-03-1	Fa 0/1		Supun Abeyrathna
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/NTP	Fa 0	SW-09	Fa 0/1		
DNS / Email/Syslog	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.

      i.   Basic Configuration (**Every Router**). Set date and time using NTP server.

      ii. Set Banner message
```
###################################################
     This is Secure area. Please enter your Authentication.
###################################################
```

      iii. Password:

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

           SSH Configuration
                Username: Admin
                Secret: **yourname@SsH.lk (First Letter Capital)**
                RSA Crypto key Module: **1024**
                Domain-name: **yasiru.lk**

02. Palin text password **must** be Encrypted.

03. Password minimum length is **10** digits.

04. Blocking Brute-force attack
        Failed Attempts - 03
        Within - 01minits
        Block for - 05minits

05. Create a web site to web server as a Sri Lanka Youth School of Computing. Its domain name **www.yasiru.lk** well as every user can access the web site.

06. Create an email server for all clients and their password is YasirU.lk@231. All users have the same emailpassword, and their email address is following like this.
        Eg :- Binal@yasiru.lk

07. Every remote session and console session's time duration is 15 minutes.

08. DNS server IP address is their Second Lowest address and WEB Server for use Third Lowest address.

09. Use DNS IP address for NTP, Syslog and TFTP

10. Save every network device configuration to the TFTP server.

11. Router CBR Switch 04 has a VLAN Configuration.

VLAN-02	LAB-01	1-5	USERS 15
VLAN-03	LAB-02	6-10	USERS 20
VLAN-04	LAB-03	11-15	USERS 10

12. Implement RIPv2 routing protocol.
13. Shutdown every unwanted port. And implement sticky MAC Filtering.

14. Established between SW-03 and SW-03-1 to Ether-channel using Port Aggregation Protocol.

SW-03 and SW-03-1	
FastEthernet 0/10	Channel Group 01
FastEthernet 0/11	Channel Group 01
FastEthernet 0/12	Channel Group 01
FastEthernet 0/20	Channel Group 02
FastEthernet 0/21	Channel Group 02
FastEthernet 0/22	Channel Group 02

15. VPN GRE Tunnel details.

Tunnel details	Source IP	Destination IP
CBR to KBR	172.20.1.1/32 (CBR)	172.20.1.2/32 (KBR)
CBR to GBR	172.20.1.5/32 (CBR)	172.20.1.6/32 (GBR)
KBR to GBR	172.20.1.9/32 (KBR)	172.20.1.10/32 (GBR)

16. Root Bridge changes to the next switch using primary command.
17. Access Control List.

- Branch's network users cannot ping server network. But they can access all services.
- SW-01 network cannot access SW-03 and SW-03-1 network.
- Probodha Silva cannot access web service.