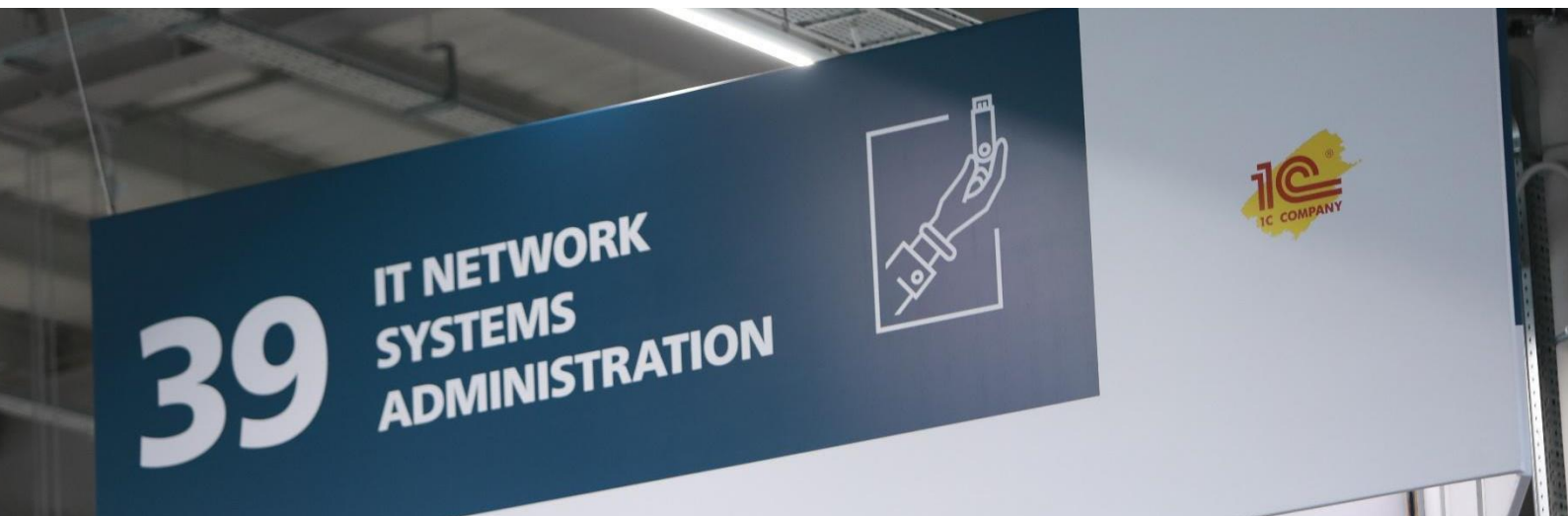


**LOMBA KOMPETENSI SISWA  
SEKOLAH MENENGAH KEJURUAN  
TINGKAT PROVINSI JAWA TIMUR TAHUN 2023**

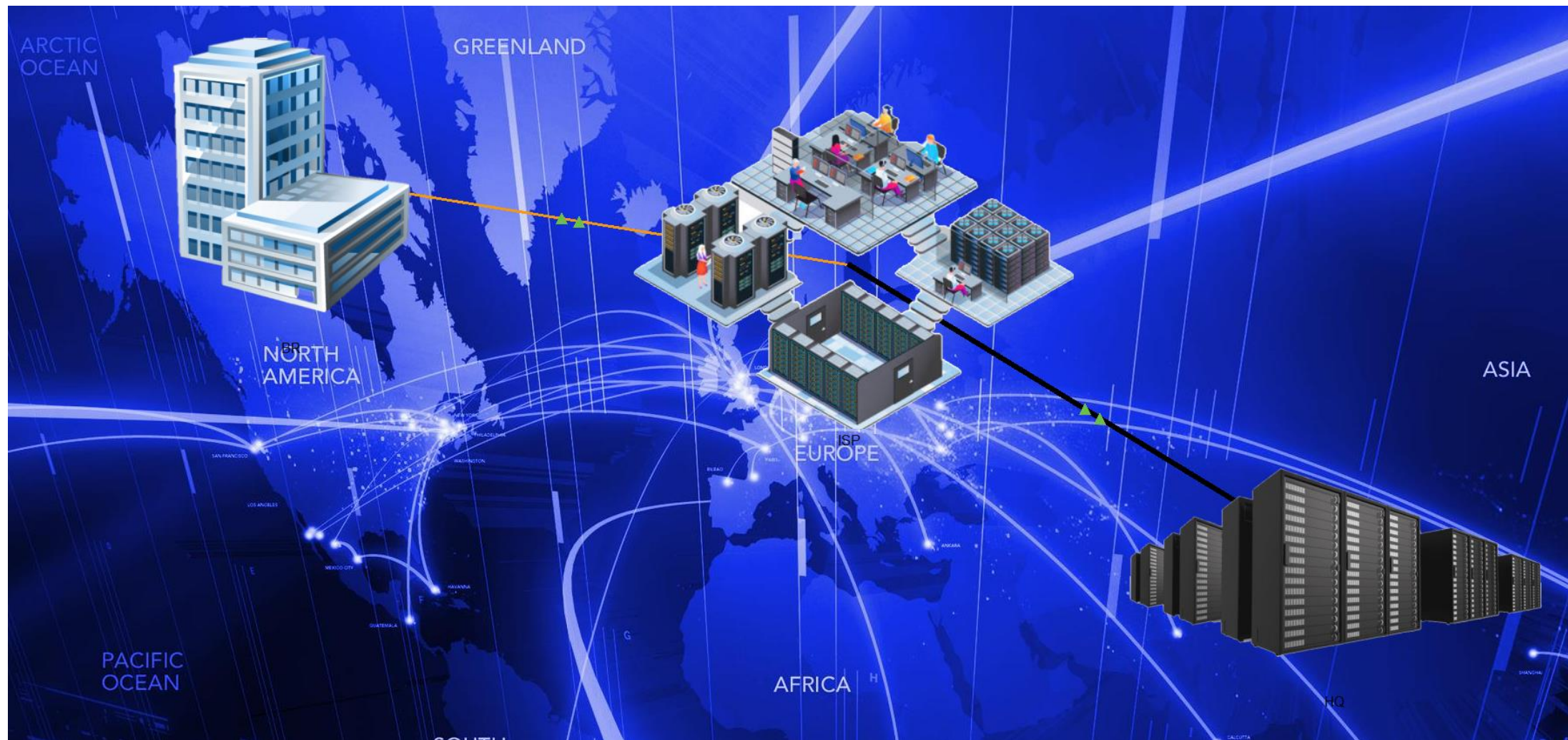


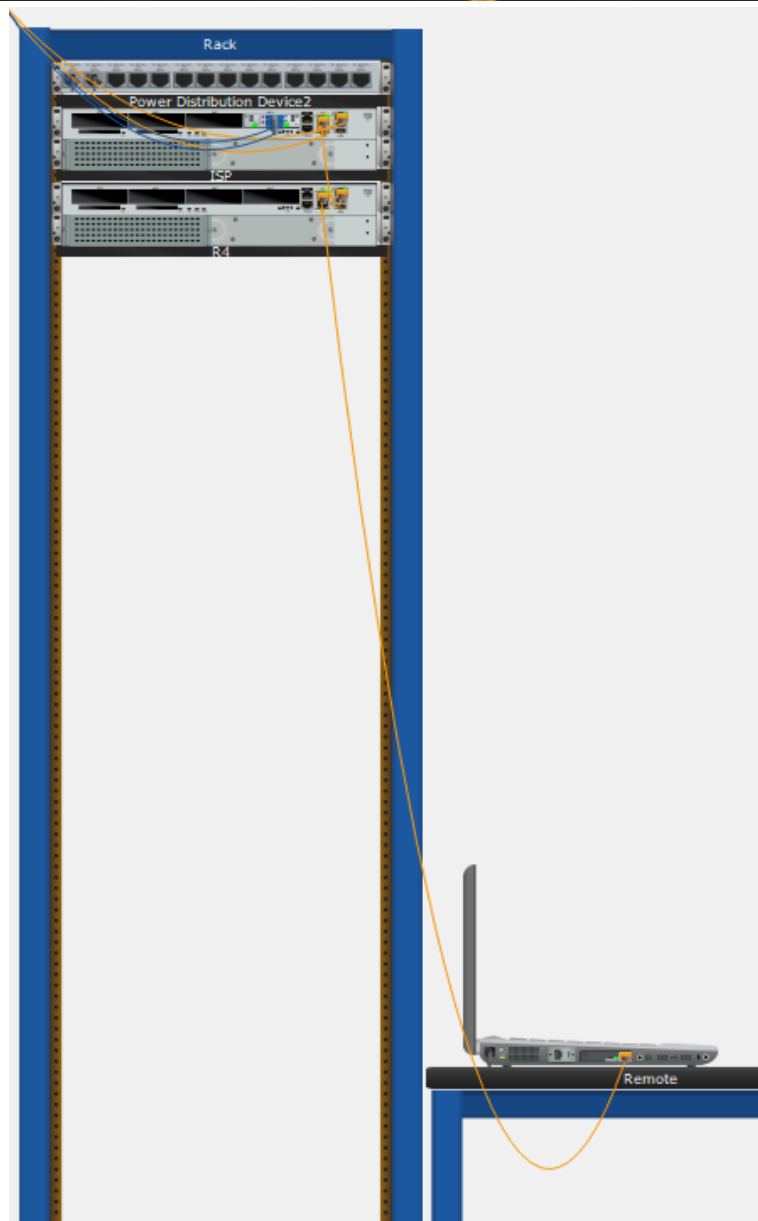
# **IT NETWORK SYSTEMS ADMINISTRATION**

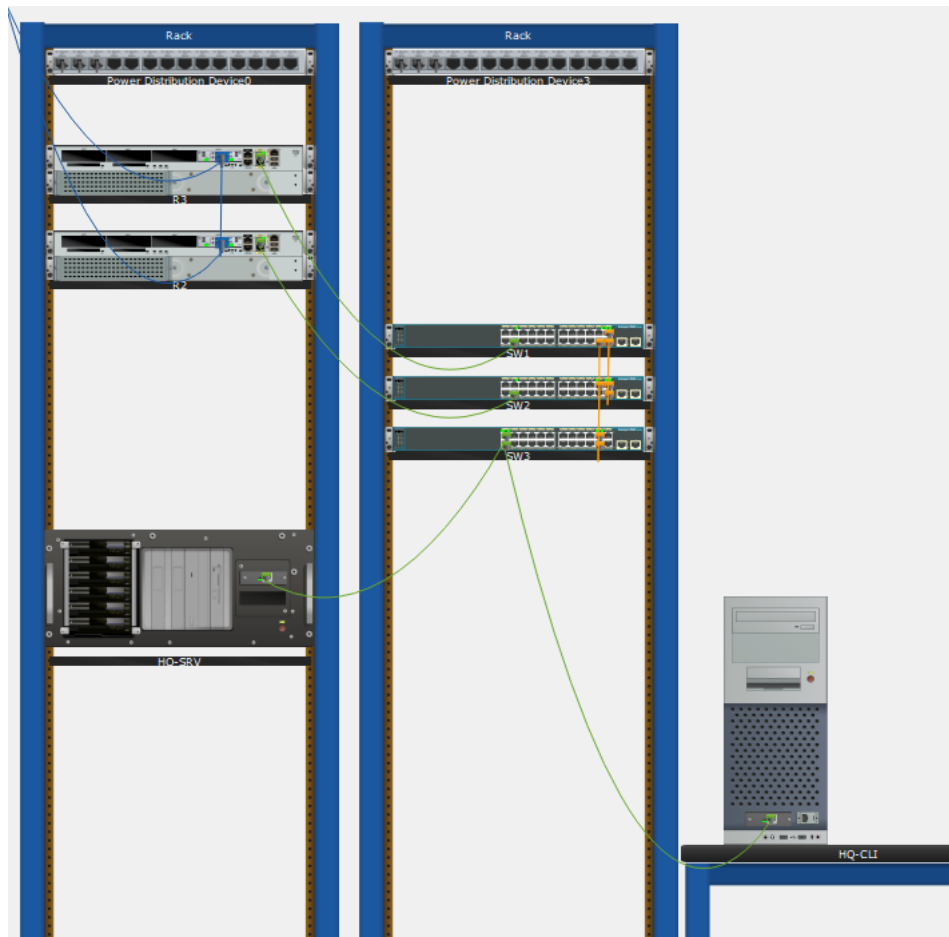


Test Project

## **MODUL B – NETWORK TROUBLESHOOTING (CISCO PACKET TRACER)**







## Tasks

- No detailed information will be given in this document. You need to analyze the existing configuration.
- The existing configuration is mostly in correct condition.
- You need to fix the following issues. Note that each issues may have different weight and difficulty.
  - Layer 2 loops is happening between SW1, SW2, and SW3.
  - Internet access from HQ-CLI is not working.
  - Remote laptop doesn't have any access to outside network.
  - Intra-subnet IPv6 is working correctly, but not for the Inter-subnet.
  - BR-CLI2 can't reach some external addresses.
  - A note from a junior engineer: VLANs are not propagated between switches but I do not know why.
  - Some DHCP clients can't lease address.

## Engineering Notes

- Username: admin
- Password: Skills39
- VLANs propagated via Vlan Trunking Protocol using version 2
- VLAN 10: HQ10
- VLAN 20: HQ20
- OSPF process ID 5
- OSPF backbone area only
- HSRP VLAN 10:
  - Group number 104
  - Virtual IP 192.168.10.254
  - Router with higher priority should immediately take over as active router.
- HSRP VLAN 20:
  - Group number 20
  - Virtual IP 192.168.20.254
  - Router with higher priority should immediately take over as active router.
- First ten addresses should not leased to clients

## Configuration Table

Device	Interface	Address
HQ-SRV	Fe0	192.168.10.1/24
		2001:1010::1/64
HQ-CLI	Ethernet0	DHCP
SW1	Vlan10	192.168.10.10/24
		2001:1010::10/64
SW2	Vlan20	192.168.20.10/24
	Vlan10	192.168.10.20/24
		2001:1010::20/64
SW3	Vlan20	192.168.20.20/24
	Vlan10	192.168.10.30/24
		2001:1010::30/24
R3	Gig0/1.10	192.168.10.253/24
		2001:1010::253/64
	Gig0/1.20	192.168.20.253/24
	Serial 0/0/0	210.103.5.1/30
	Serial 0/0/1	210.103.6.2/30
R2	lo 0	3.3.3.3/32
	Gig0/1.10	192.168.10.252/24
		2001:1010::252/64
	Gig0/1.20	192.168.20.252/24
	Serial 0/0/1	210.103.5.5/30
R1	Serial 0/0/0	210.103.6.1/30
	Gig0/0	210.103.5.13/30
	Gig0/1	172.16.10.254/24
BR-CLI	lo 0	1.1.1.1/32
	Ethernet0	DHCP
ISP	Serial 0/0/0	210.103.5.2/30
	Serial 0/0/1	210.103.5.6/30
	Gig0/1	210.103.5.10/30
	Gig0/2	210.103.5.254/25
	Gig0/0	210.103.5.14/30
	lo 0	8.8.8.8/32
R4	Gig0/0	210.103.5.9/30
	Gig0/1	210.103.7.254/24
	lo 0	4.4.4.4/32
remote	Ethernet0	210.103.7.1/24
FW1	Gig1/1(outside)	210.103.5.129/25
	Gig1/2(inside)	172.16.20.254/24
BR-CLI2	Ethernet0	172.16.20.1/24



# Network Topology

