**INWM201 Case Study 2**

**Refer to the partially configured Packet Tracer network – complete the configuration using the instructions below. This should not take you more than 1 hour 45 minutes to complete.**

**Part 1 ‐ Configure the network devices with the following IP address information (please note some interfaces have already been configured. The routing protocol, *EIGRP*, has also been configured for connectivity – please do not make any changes to that config):**

|  |  |  |
| --- | --- | --- |
| **RouterA** | **IP Address** | **Subnet Mask** |
| GigabitEthernet 0/0 | 10.1.1.1 | 255.255.255.252 |
| GigabitEthernet 0/1 | 10.1.1.5 | 255.255.255.252 |
| GigabitEthernet 0/2 | 202.2.2.1 | 255.255.255.252 |
| **RouterB** | **IP Address** | **Subnet Mask** |
| GigabitEthernet 0/0 | 10.1.1.2 | 255.255.255.252 |
| GigabitEthernet 0/1 | 10.1.1.9 | 255.255.255.252 |
| GigabitEthernet 0/2 | 10.1.2.1 | 255.255.255.0 |
| **RouterC** | **IP Address** | **Subnet Mask** |
| GigabitEthernet 0/0 | 10.1.1.6 | 255.255.255.252 |
| GigabitEthernet 0/1 | 10.1.1.10 | 255.255.255.252 |
| GigabitEthernet 0/2 | 10.1.2.2 | 255.255.255.0 |
| **PCA** | 10.1.2.5 | 255.255.255.0 |
| **PCB** | 10.1.2.6 | 255.255.255.0 |
| **Web Server** | 202.2.2.2 | 255.255.255.252 |
| **NTP Server** | 10.1.2.3 | 255.255.255.0 |
| **TFTP Server** | 10.1.2.4 | 255.255.255.0 |
| **North1** | 10.1.2.7 | 255.255.255.0 |
| **North2** | 10.1.2.8 | 255.255.255.0 |
| **South1** | 10.1.2.9 | 255.255.255.0 |
| **South2** | 10.1.2.10 | 255.255.255.0 |

**Connect the following:**

‐ North1 Port 5 to South1 Port 5

‐ North1 Port 1 to North2 Port 1

‐ South1 Port 1 to South2 Port 1

‐ North2 Port 5 to South2 Port 5

‐ North2 Port 8 to South1 Port 8

‐ North1 Port 8 to South2 Port 8

# Part 2 – NTP

‐ Ensure the NTP Server has the date of *6 June 2022*

‐ Configure all routers and switches to get their date and time from the NTP Server

**Part 3 – Record the following STP‐related information in the table below:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Switch** | **Port** | **Status (FWD, BLK…)** | **Root Bridge?** |
| North1  *S1 S1* | F0/1 | FWD | NO |
| F0/5 | BLK | NO |
| F0/8 | BLK | NO |
| South1  *S1 S2* | F0/1 | FWD | NO |
| F0/5 | FWD | NO |
| F0/8 | FWD | NO |
| North2  *S1 S3* | F0/1 | FWD | YES |
| F0/5 | FWD | YES |
| F0/8 | FWD | YES |
| South2  *S1 S3* | F0/1 | BLK | NO |
| F0/5 | FWD | NO |
| F0/8 | FWD | NO |

**Part 4 – Configure HSRP on RouterB and RouterC**

‐ Configure HSRP version 2 on routers RouterB and RouterC – use 10.1.2.20/24 as the virtual IP address to represent both routers

‐ Ensure RouterC is the Active Router and RouterB is the Standby Router

‐ Ensure that if RouterC fails, RouterB takes over as the Active Router

‐ If RouterC starts working again, then RouterC must take over as the Active Router again

**Part 5 – Backup of files**

‐ Backup the configuration files of North1, North2, South1 and South2 to the TFTP Server

‐ Backup the IOS of RouterB and RouterC to the TFTP Server

**Part 6 – Testing redundancy in the network**

‐ Pings/traceroute to the Internet Server from PCA and PCB should work

‐ Shutdown the G0/2 interface of RouterC – check that RouterB has become ‘Active’

‐ Pings/traceroute to the Internet Server from PCA and PCB should still work

‐ Use ‘no shut’ on the G0/2 interface of RouterC – check that RouterC has become ‘Active’ again

‐ Pings/traceroute to Internet Server from PCA and PCB should still work