# CSE421 Project
# Group 14
# Topic 2
# Game of Thrones

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# VLSM/Network Address Table

## 192.168.0.0/18

| Host Name | Host | IP | GIVEN IP | Host Bit | Net Bit | IP Address | Subnet Mask |
|---|---|---|---|---|---|---|---|
| Beyond The wall | 5000 | 5002 | 8192 | 13 | 19 | 192.168.0.0./19 | 255.255.224.0 |
| The stromlands | 2000 | 2002 | 2048 | 11 | 21 | 192.168.32.0/21 | 255.255.248.0 |
| The north | 1024 | 1026 | 1048 | 11 | 21 | 192.168.40.0/21 | 255.255.248.0 |
| The Reach | 1000 | 1002 | 1024 | 10 | 22 | 192.168.48.0/22 | 255.255.252.0 |
| The Iron Island | 800 | 802 | 1024 | 10 | 22 | 192.168.52.0/22 | 255.255.252.0 |
| The Rocks | 480 | 482 | 512 | 9 | 23 | 192.168.56.0/23 | 255.255.254.0 |
| The mountain & the vale | 250 | 252 | 256 | 8 | 24 | 192.168.58.0/24 | 255.255.255.0 |
| The Drone | 124 | 126 | 128 | 8 | 24 | 192.168.59.0/24 | 255.255.255.0 |
| R0-R2 | 2 | 4 | 4 | 2 | 30 | 192.168.59.192/30 | 255.255.255.252 |
| R3-R2 | 2 | 4 | 4 | 2 | 30 | 192.168.59.196/30 | 255.255.255.252 |
| R3-R1 | 2 | 4 | 4 | 2 | 30 | 192.168.59.200/30 | 255.255.255.252 |
| R0-R1 | 2 | 4 | 4 | 2 | 30 | 192.168.59.208/30 | 255.255.255.252 |
| R0-R3 | 2 | 4 | 4 | 2 | 30 | 192.168.59.204/30 | 255.255.255.252 |

| Device | Interface | IP Address | Subnet Mask | Default Gateway |
|---|---|---|---|---|
| R0 | FE0/0 | 192.168.40.10 | 255.255.248.0 | N/A |
| | FE1/0 | 192.168.48.10 | 255.255.252.0 | N/A |
| | SE2/0 | 192.168.59.210 | 255.255.255.252 | N/A |
| | SE3/0 | 192.168.59.194 | 255.255.255.252 | N/A |
| | SE7/0 | 192.168.59.206 | 255.255.255.252 | N/A |
| R1 | FE0/0 | 192.168.52.10 | 255.255.252.0 | N/A |
| | FE1/0 | 192.168.56.10 | 255.255.254.0 | N/A |
| | SE2/0 | 192.168.59.210 | 255.255.255.252 | N/A |
| | SE3/0 | 192.168.59.202 | 255.255.255.252 | N/A |
| R2 | FE0/0 | 192.168.0.10 | 255.255.224.0 | N/A |
| | FE1/0 | 192.168.32.10 | 255.255.248.0 | N/A |
| | SE2/0 | 192.168.59.198 | 255.255.255.252 | N/A |
| | SE3/0 | 192.168.59.194 | 255.255.255.252 | N/A |
| R3 | FE0/0 | 192.168.59.10 | 255.255.255.0 | N/A |
| | FE1/0 | 192.168.58.10 | 255.255.255.0 | N/A |
| | SE2/0 | 192.168.59.198 | 255.255.255.252 | N/A |
| | SE3/0 | 192.168.59.202 | 255.255.255.252 | N/A |
| | SE7/0 | 192.168.59.206 | 255.255.255.252 | N/A |
| 192.168.40.9 | NIC | 192.168.40.9 | 255.255.248.0 | 192.168.40.10 |
| 192.168.40.8 | NIC | 192.168.40.8 | 255.255.248.0 | 192.168.40.10 |
| 192.168.48.9 | NIC | 192.168.48.9 | 255.255.252.0 | 192.168.48.10 |
| 192.168.48.8 | NIC | 192.168.48.8 | 255.255.252.0 | 192.168.48.10 |
| 192.168.56.9 | NIC | 192.168.56.9 | 255.255.254.0 | 192.168.56.10 |

| | | | | |
|---|---|---|---|---|
| 192.168.52.8 | NIC | 192.168.52.8 | 255.255.252.0 | 192.168.52.10 |
| 192.168.52.9 | NIC | 192.168.52.9 | 255.255.252.0 | 192.168.52.10 |
| 192.168.32.8 | NIC | 192.168.32.8 | 255.255.248.0 | 192.168.32.10 |
| 192.168.32.9 | NIC | 192.168.32.9 | 255.255.248.0 | 192.168.32.10 |
| 192.168.0.5 | NIC | 192.168.0.5 | 255.255.224.0 | 192.168.0.10 |
| 192.168.58.9 | NIC | 192.168.58.9 | 255.255.255.0 | 192.168.58.10 |
| 192.168.58.8 | NIC | 192.168.58.8 | 255.255.255.0 | 192.168.58.10 |
| 192.168.59.9 | NIC | 192.168.59.9 | 255.255.255.252 | 192.168.59.10 |

# **Commands:**

# Router 0:

Router#enable
Router#conf t
Router#conf terminal
The North
Router(config)#interface fa0/0
Router(config-if)#ip address 192.168.40.10 255.255.248.0
Router(config-if)#no shutdown
Router(config-if)#exit
The Reach
Router(config)#interface fa1/0
Router(config-if)#ip address 192.168.48.10 255.255.252.0
Router(config-if)#no shutdown
Router(config-if)#exit

## R0-R1

Router(config)#interface Serial2/0
Router(config-if)#ip address 192.168.59.210 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.211
Router(config)#exit

## R0-R2

Router(config)#interface Serial3/0
Router(config-if)#ip address 192.168.59.194 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.195
Router(config)#exit

## R0-R3

Router(config)#interface Serial7/0
Router(config-if)#ip address 192.168.59.206 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.207
Router(config)#exit


# Router 1:

Router#enable
Router#conf t
Router#conf terminal

The Rock/Lanisters

Router(config)#interface fa1/0
Router(config-if)#ip address 192.168.56.10 255.255.254.0
Router(config-if)#no shutdown
Router(config-if)#exit

Iron Island

Router(config)#interface fa0/0
Router(config-if)#ip address 192.168.52.10 255.255.252.0
Router(config-if)#no shutdown
Router(config-if)#exit

R1-R0

Router(config)#interface Serial2/0
Router(config-if)#ip address 192.168.59.210 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.211
Router(config)#exit

R1-R3

Router(config)#interface Serial3/0
Router(config-if)#ip address 192.168.60.202 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.203
Router(config)#exit

# Router 2:

Router>enable
Router#conf t
Router#conf terminal

Beyond The Wall
Router(config)#interface fa0/0
Router(config-if)#ip address 192.168.0.10 255.255.224.0
Router(config-if)#no shutdown
Router(config-if)#exit
Stromlands
Router(config)#interface fa1/0
Router(config-if)#ip address 192.168.32.10 255.255.248.0
Router(config-if)#no shutdown
Router(config-if)#exit

R2-R3
Router(config)#interface Serial2/0
Router(config-if)#ip address 192.168.59.198 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.199
Router(config)#exit

R2-R0
Router(config)#interface Serial3/0
Router(config-if)#ip address 192.168.59.194 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.195
Router(config)#exit

# Router 3:

Router>enable
Router#conf t
Router#conf terminal

## Drone
Router(config)#interface fa0/0
Router(config-if)#ip address 192.168.59.10 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit

## Mount & Valy
Router(config)#interface fa1/0
Router(config-if)#ip address 192.168.58.10 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit

## R3-R2
Router(config)#int se2/0
Router(config-if)#clock rate 64000
Router(config-if)#ip address 92.168.59.198 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit

## R3-R0
Router(config)#interface Serial7/0
Router(config-if)#ip address 192.168.59.206 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.207
Router(config)#exit

## R3-R1
Router(config)#interface Serial3/0
Router(config-if)#ip address 192.168.60.202 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.59.203

Router(config)#exit


## Static Routing

R1
Router(config)#ip route 192.168.32.0 255.255.248.0 192.168.59.198
Router(config)#ip route 192.168.0.0 255.255.224.0 192.168.0.10
Router(config)#ip route 192.168.58.0 255.255.255 192.168.59.198
Router(config)# ip route 192.168.58.0 255.255.255.0 192.168.58.10
Router(config)# ip route 192.168.59.0 255.255.255.0 192.168.59.10
Router(config)#ip route 192.168.40.0 255.255.248.0 192.168.40.10
Router(config)#ip route 192.168.48.0 255.255.252.0 192.168.48.10


R0

Router(config)#ip route 192.168.32.0 255.255.248.0 192.168.32.10
Router(config)#ip route 192.168.0.0 255.255.224.0 192.168.0.10
Router(config)#ip route 192.168.58.0 255.255.255.0 192.168.59.10
Router(config)#ip route 192.168.58.0 255.255.255.0 192.168.59.206
Router(config)#ip route 192.168.59.0 255.255.255.0 192.168.59.206
Router(config)# ip route 192.168.56.0 255.255.254.0 192.168.56.10
Router(config)#ip route 192.168.52.0 255.255.252.0 192.168.56.10


## Dynamic Routing

## Router 2

Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.

Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#no auto-summary
Router(config-router)#network 192.168.60.196
Router(config-router)#network 192.168.0.0
Router(config-router)#network 192.168.60.192
Router(config-router)#network 192.168.32.0
Router(config-router)#default-information originate
Router(config-router)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#

## Router 3

Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#network 192.168.60.196
Router(config-router)#network 192.168.58.0
Router(config-router)#network 192.168.59.0
Router(config-router)#network 192.168.60.200
Router(config-router)#network 192.168.60.204
Router(config-router)#no auto-summary
Router(config-router)#default-information originate

```
Router(config-router)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```