# SOHO Network Documentation

Let’s assume that this is XYZ Company in Eastern Company in Canada. The Company have 3 Departments Admin/IT, Finance/HR, Customer Service/Reception.

## Base Network Configuration

BASE NETWORK: 192.168.1.0

NO. OF SUBNET= 3

BLOCK SIZE= 64

NEW SUBNET MASK: 255.255.255.192

1ST SUBNET

NETWORK ID: 192.168.1.0

BROADCAST ID: 192.168.1.63

HOST RANGE: 192.168.1.1-192.168.1.62

2ND SUBNET

NETWORK ID: 192.168.1.64

BROADCAST ID: 192.168.1.127

HOST RANGE: 192.168.1.65-192.168.1.126

3RD SUBNET

NETWORK ID: 192.168.1.128

BROADCAST ID: 192.168.1.191

HOST RANGE: 192.168.1.129-192.168.1.190

A diagram of a computer network

Description automatically generated

Each Department have different VLAN.

DHCP is Set up in each device.

Configure the AP and setup their password.

Wifi Name Admin wifi Finance wifi CS wifi

Password Admin@123 Finance@123 Reception@123

Connect the Phones, Tablets and Laptops with WIFI.

# Switch Configuration

Switch> en

Switch# conf t

Switch (config)# int range fa0/2-4

Switch (config)# switchport mode access

Switch (config)# switchport access vlan 10

Switch (config)# int range fa0/5-7

Switch (config)# switchport mode access

Switch (config)# switchport access vlan 20

Switch (config)# int range fa0/8-10

Switch (config)# switchport mode access

Switch (config)# switchport access vlan 30

Switch (config)#int fa0/1

Switch (config)# switchport mode trunk

# Router Configuration

Router> en

Router# conf t

Router (config) int g0/0

Router (config) no shut

Router (config) exit

Router (config) int g0/0.10

Router (config-subif) encapsulation dotlQ10

Router (config-subif) ip address 192.168.1.1 255.255.255.192

Router (config-subif) exit

Router (config) int g0/0.20

Router (config-subif) encapsulation dotlQ20

Router (config-subif) ip address 192.168.1.65 255.255.255.192

Router (config-subif) exit

Router (config) int g0/0.30

Router (config-subif) encapsulation dot1Q30

Router (config-subif) ip address 192.168.1.129 255.255.255.192

Router (config-subif) exit

Router (dhcp-config) service DHCP

Router (dhcp-config) ip DHCP pool Admin-Pool

Router (dhcp-config) network 192.168.1.0 255.255.255.192

Router (dhcp-config) default-router 192.168.1.1

Router (dhcp-config) dns-server 192.168.1.1

Router (dhcp-config) domain-name Admin.com

Router (dhcp-config) exit

Router (dhcp-config) ip DHCP pool Financial-Pool

Router (dhcp-config) network 192.168.1.64 255.255.255.192

Router (dhcp-config) default-router 192.168.1.65

Router (dhcp-config) dns-server 192.168.1.65

Router (dhcp-config) domain-name Financial.com

Router (dhcp-config) exit

Router (dhcp-config) ip DHCP pool CS-Pool

Router (dhcp-config) network 192.168.1.128 255.255.255.192

Router (dhcp-config) default-router 192.168.1.129

Router (dhcp-config) dns-server 192.168.1.129

Router (dhcp-config) domain-name CS.com

Router (dhcp-config) exit