Network configurations

M&H SOLUTIONS

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Core router 1

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Core-R1

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure SSH login.

ip domain name viralclick.net

username Admin password XjR24$%6Lim

crypto key generate rsa

1024

line vty 0 15

login local

transport input ssh

exit

ip ssh version 2

do write

configure ip address to interfaces

int gig 0/0

ip address 192.168.4.130 255.255.255.252

no shutdown

int gig 0/1

ip address 192.168.4.134 255.255.255.252

no shutdown

do write

int se 0/3/0

clock rate 64000

ip address 170.182.191.1 255.255.255.252

no shutdown

do write

configure OSPF

ip routing

router ospf 10

network 192.168.4.128 0.0.0.15 area 0

network 192.168.4.132 0.0.0.15 area 0

network 170.182.191.0 0.0.0.15 area 0

do write

configure NAT

ip nat inside source list 1 int se 0/3/0 overload

access-list 1 permit 192.168.1.0 0.0.0.127

access-list 1 permit 192.168.1.28 0.0.0.127

access-list 1 permit 192.168.2.0 0.0.0.127

access-list 1 permit 192.168.2.128 0.0.0.127

access-list 1 permit 192.168.3.0 0.0.0.127

access-list 1 permit 192.168.3.128 0.0.0.127

int range gig0/0-1

ip nat inside

int se 0/3/0

ip nat outside

do write

configure default static route

ip route 0.0.0.0 0.0.0.0 se 0/3/0

do write

Core router 2

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Core-R2

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure SSH login.

ip domain name viralclick.net

username Admin password XjR24$%6Lim

crypto key generate rsa

1024

line vty 0 15

login local

transport input ssh

exit

ip ssh version 2

do write

configure ip to interfaces

int gig 0/0

ip address 192.168.4.138 255.255.255.252

no shutdown

int gig 0/1

ip address 192.168.4.142 255.255.255.252

no shutdown

do write

int se 0/3/1

clock rate 64000

ip address 170.182.191.5 255.255.255.252

no shutdown

do write

configure ospf

ip routing

router ospf 10

network 192.168.4.136 0.0.0.15 area 0

network 192.168.4.140 0.0.0.15 area 0

network 170.182.191.4 0.0.0.15 area 0

do write

Configure NAT

ip nat inside source list 1 int se 0/3/1 overload

access-list 1 permit 192.168.1.0 0.0.0.127

access-list 1 permit 192.168.1.28 0.0.0.127

access-list 1 permit 192.168.2.0 0.0.0.127

access-list 1 permit 192.168.2.128 0.0.0.127

access-list 1 permit 192.168.3.0 0.0.0.127

access-list 1 permit 192.168.3.128 0.0.0.127

int range gig0/0-1

ip nat inside

int se 0/3/1

ip nat outside

do write

configure default static route

ip route 0.0.0.0 0.0.0.0 se 0/3/1

do write

Multilayer switch 1

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Multi-SW1

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure SSH login

ip domain name viralclick.net

username Admin password XjR24$%6Lim

crypto key generate rsa

1024

line vty 0 15

login local

transport input ssh

exit

ip ssh version 2

do write

Configure Vlans to L3 switches

int range gig 1/0/3-9

switchport mode trunk

vlan 10

name Reception

vlan 20

name Operations

vlan 30

name Finance

vlan 40

name HR

Vlan 50

name Marketing

vlan 60

name ICT

vlan 70

name ServerRoom

vlan 99

name BlackHole

do write

configure ip addresses to interfaces

int range gig 1/0/1-2

no switchport

int gig 1/0/1

ip address 192.168.4.129 255.255.255.252

no shutdown

int gig 1/0/2

ip address 192.168.4.137 255.255.255.252

no shutdown

do write

Configure ospf

ip routing

router ospf 10

network 192.168.1.0 0.0.0.127 area 0

network 192.168.1.128 0.0.0.127 area 0

network 192.168.2.0 0.0.0.127 area 0

network 192.168.2.128 0.0.0.127 area 0

network 192.168.3.0 0.0.0.127 area 0

network 192.168.3.128 0.0.0.127 area 0

network 192.168.4.0 0.0.0.127 area 0

network 192.168.4.128 0.0.0.15 area 0

network 192.168.4.136 0.0.0.15 area 0

do write

Configure inter-vlan routing

int vlan 10

no sh

ip address 192.168.1.1 255.255.255.128

ip helper-address 192.168.4.2

int vlan 20

no sh

ip address 192.168.1.129 255.255.255.128

ip helper-address 192.168.4.2

int vlan 30

no sh

ip address 192.168.2.1 255.255.255.128

ip helper-address 192.168.4.2

int vlan 40

no sh

ip address 192.168.2.129 255.255.255.128

ip helper-address 192.168.4.2

int vlan 50

no sh

ip address 192.168.3.1 255.255.255.128

ip helper-address 192.168.4.2

int vlan 60

no sh

ip address 192.168.3.129 255.255.255.128

ip helper-address 192.168.4.2

int vlan 70

no sh

ip address 192.168.4.1 255.255.255.128

ip helper-address 192.168.4.2

do write

configure default static route

ip route 0.0.0.0 0.0.0.0 gig 1/0/1

ip route 0.0.0.0 0.0.0.0 gig 1/0/2 70

do write

Multilayer switch 2

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Multi-SW2

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure SSH login

ip domain name viralclick.net

username Admin password XjR24$%6Lim

crypto key generate rsa

1024

line vty 0 15

login local

transport input ssh

exit

ip ssh version 2

do write

Configure Vlans to L3 switches

int range gig 1/0/3-9

switchport mode trunk

vlan 10

name Reception

vlan 20

name Operations

vlan 30

name Finance

vlan 40

name HR

Vlan 50

name Marketing

vlan 60

name ICT

vlan 70

name ServerRoom

vlan 99

name BlackHole

do write

Configure ip addresses to interfaces

int range gig 1/0/1-2

no switchport

int gig 1/0/1

ip address 192.168.4.133 255.255.255.252

no shutdown

int gig 1/0/2

ip address 192.168.4.141 255.255.255.252

no shutdown

do wr

Configure ospf

ip routing

router ospf 10

network 192.168.1.0 0.0.0.127 area 0

network 192.168.1.128 0.0.0.127 area 0

network 192.168.2.0 0.0.0.127 area 0

network 192.168.2.128 0.0.0.127 area 0

network 192.168.3.0 0.0.0.127 area 0

network 192.168.3.128 0.0.0.127 area 0

network 192.168.4.0 0.0.0.127 area 0

network 192.168.4.132 0.0.0.15 area 0

network 192.168.4.140 0.0.0.15 area 0

do write

Configure inter-vlan routing

int vlan 10

no sh

ip address 192.168.1.1 255.255.255.128

ip helper-address 192.168.4.2

int vlan 20

no sh

ip address 192.168.1.129 255.255.255.128

ip helper-address 192.168.4.2

int vlan 30

no sh

ip address 192.168.2.1 255.255.255.128

ip helper-address 192.168.4.2

int vlan 40

no sh

ip address 192.168.2.129 255.255.255.128

ip helper-address 192.168.4.2

int vlan 50

no sh

ip address 192.168.3.1 255.255.255.128

ip helper-address 192.168.4.2

int vlan 60

no sh

ip address 192.168.3.129 255.255.255.128

ip helper-address 192.168.4.2

int vlan 70

no sh

ip address 192.168.4.1 255.255.255.128

ip helper-address 192.168.4.2

do write

configure default static route

ip route 0.0.0.0 0.0.0.0 gig 1/0/1

```
ip route 0.0.0.0 0.0.0.0 gig 1/0/2 70

do write
```

Reception switch

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Reception-SW

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure trunk ports

int range fa 0/1-2

switchport mode trunk

exit

Configure vlan

vlan 10

name Reception

exit

int range fa0/3-24

switchport mode access

switchport access vlan 10

exit

do write

Disable gigabit ports.

vlan 99

name BlackHole

exit

int range gig 0/1-2

switchport mode access

switchport access vlan 99

shutdown

exit

do write

Enable switchport access security

int range fa 0/3-24

switchport port-security maximum 1

switchport port-security mac-address sticky

switchport port-security violation shutdown

ex

do write

Operations switch

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Operations-SW

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure trunk ports

int range fa 0/1-2

switchport mode trunk

exit

Configure vlan

vlan 20

name Operations

exit

int range fa0/3-24

switchport mode access

switchport access vlan 20

exit

do write

Disable gigabit ports

vlan 99

name BlackHole

exit

int range gig 0/1-2

switchport mode access

switchport access vlan 99

shutdown

exit

do write

Enable port security

int range fa 0/3-24

switchport port-security maximum 1

switchport port-security mac-address sticky

switchport port-security violation shutdown

ex

do write

Finance switch

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Finance-SW

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure trunk ports

int range fa 0/1-24

switchport mode trunk

exit

Configure vlan

vlan 30

name Finance

exit

int range fa0/3-24

switchport mode access

switchport access vlan 30

exit

do write

Disable gigabit ports

vlan 99

name BlackHole

exit

int range gig 0/1-2

switchport mode access

switchport access vlan 99

shutdown

exit

do write

Enable port security

int range fa 0/3-24

switchport port-security maximum 1

switchport port-security mac-address sticky

switchport port-security violation shutdown

ex

do write

Hr switch

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname HR-SW

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure trunk ports

int range fa 0/1-24

switchport mode trunk

exit

Configure vlan

vlan 40

name HR

exit

int range fa0/3-24

switchport mode access

switchport access vlan 40

exit

do write

Disable gigabit ports

vlan 99

name BlackHole

exit

int range gig 0/1-2

switchport mode access

switchport access vlan 99

shutdown

exit

do write

Enable port security

int range fa 0/3-24

switchport port-security maximum 1

switchport port-security mac-address sticky

switchport port-security violation shutdown

ex

do write

Marketing switch

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Marketing-SW

banner motd #NO UNATHORISED ACCESS! #

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure trunk ports

int range fa 0/1-24

switchport mode trunk

exit

Configure Vlan

vlan 50

name Marketing

exit

int range fa0/3-24

switchport mode access

switchport access vlan 50

exit

do write

Disable gigabit ports

vlan 99

name BlackHole

exit

int range gig 0/1-2

switchport mode access

switchport access vlan 99

shutdown

exit

do write

Enable port security

int range fa 0/3-24

switchport port-security maximum 1

switchport port-security mac-address sticky

switchport port-security violation shutdown

ex

do write

ICT switch

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname ICT-SW

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure trunk ports

int range fa 0/1-2

switchport mode trunk

exit

Configure Vlan

vlan 60

name ICT

exit

int range fa0/3-24

switchport mode access

switchport access vlan 60

exit

do write

Disable Gigabit ports

vlan 99

name BlackHole

exit

int range gig 0/1-2

switchport mode access

switchport access vlan 99

shutdown

exit

do write

Enable port security

int range fa 0/3-24

switchport port-security maximum 1

switchport port-security mac-address sticky

switchport port-security violation shutdown

ex

do write

Server room switch

Basic configuration. Configure a hostname, and login details.

enable

config terminal

hostname Server-Room-SW

banner motd #NO UNATHORISED ACCESS!#

No ip domain lookup

line console 0

password XjR24$%6Lim

login

exit

Enable password XjR24$%6Lim

service password-encryption

do write

Configure trunk ports

int range fa 0/1-2

switchport mode trunk

exit

Configure vlan

vlan 70

name Server-Room

exit

int range fa0/3-24

switchport mode access

switchport access vlan 70

exit

do write

Disable gigabit ports

vlan 99

name BlackHole

exit

int range gig 0/1-2

switchport mode access

switchport access vlan 99

shutdown

exit

do write

Enable port security

int range fa 0/3-24

switchport port-security maximum 1

switchport port-security mac-address sticky

switchport port-security violation shutdown

ex

do write

DHCP

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
Finance	192.168.2.1	192.168.4.3	192.168.2.10	255.255.255.128	118	0.0.0.0	0.0.0.0
ICT	192.168.3.129	192.168.4.3	192.168.3.130	255.255.255.128	120	0.0.0.0	0.0.0.0
Reception	192.168.1.1	192.168.4.3	192.168.1.10	255.255.255.128	118	0.0.0.0	0.0.0.0
Marketing	192.168.3.1	192.168.4.3	192.168.3.10	255.255.255.128	118	0.0.0.0	0.0.0.0
HR	192.168.2.129	192.168.4.3	192.168.2.130	255.255.255.128	120	0.0.0.0	0.0.0.0
Opperations	192.168.1.129	192.168.4.3	192.168.1.130	255.255.255.128	118	0.0.0.0	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	192.168.4.0	255.255.255.0	512	0.0.0.0	0.0.0.0

Wi-Fi

Port 1	
Port Status	☑ On
SSID	M%H_Solutions
2.4 GHz Channel	6
Coverage Range (meters)	140,00

Authentication

○ Disabled ○ WEP   WEP Key

○ WPA-PSK ● WPA2-PSK   PSK Pass Phrase   k731w2isKool%

User ID

Password

Encryption Type   AES