**Initial Router Configuration**

**Main Campus R1**

* enable
* conf t
* hostname main-campus-R1
* int se0/3/0
* ip address 10.10.10.5 255.255.255.252
* no shutdown
* int se0/3/1
* ip address 10.10.10.1 255.255.255.252
* no shutdown
* int g0/0
* no shutdown

**Branch Campus R1**

* enable
* conf t
* hostname branch-campus-R1
* int se0/3/0
* ip address 10.10.10.2 255.255.255.252
* no shutdown
* int g0/0
* no shutdown

**Cloud Router**

* enable
* conf t
* hostname cloud-R1
* int se0/3/0
* ip address 10.10.10.6 255.255.255.252
* no shutdown
* int g0/0
* ip address 20.0.0.1 255.255.255.252
* no shutdown

**Cloud Email Server**

* IP Address: 20.0.0.2 255.255.255.252
* Default Gateway: 20.0.0.1

**VLANs – Layer 2 Switches**

**Building A – Admin SW**

* enable
* conf t
* hostname BA-admin-SW1
* vlan 10
* name Admin
* int range fa0/1-24
* switchport mode access
* switchport access vlan 10
* description ## Admin Dept ##
* do show vlan brief

**Building A – HR SW**

* hostname BA-HR-SW1
* vlan 20
* name HR
* int range fa0/1-24
* switchport mode access
* switchport access vlan 20
* description ## HR Dept ##
* do show vlan brief

**Building A – Finance SW**

* hostname BA-finance-SW1
* vlan 30
* name Finance
* int range fa0/1-24
* switchport mode access
* switchport access vlan 30
* description ## Finance Dept ##
* do show vlan brief

**Building A – Business SW**

* hostname BA-business-SW1
* vlan 40
* name Business
* int range fa0/1-24
* switchport mode access
* switchport access vlan 40
* description ## Business Dept ##
* do show vlan brief

**Building B – Engineering & Computing SW**

* hostname BB-eng&comp-SW1
* vlan 50
* name ENG&COM
* int range fa0/1-24
* switchport mode access
* switchport access vlan 50
* description ## Engineering and Computer Science Dept ##
* do show vlan brief

**Building B – Art & Design SW**

* hostname BB-art&des-SW1
* vlan 60
* name Art&Design
* int range fa0/1-24
* switchport mode access
* switchport access vlan 60
* description ## Art & Design Dept ##
* do show vlan brief

**Building C – Student Lab SW**

* hostname BC-std.lab-SW1
* vlan 70
* name Main.Std.Lab
* int range fa0/1-24
* switchport mode access
* switchport access vlan 70
* description ## Students Lab ##
* do show vlan brief

**Building C – IT Dept SW**

* hostname BC-it.dept-SW1
* vlan 80
* name IT.Dept
* int range fa0/1-24
* switchport mode access
* switchport access vlan 80
* description ## IT Dept ##
* do show vlan brief

**Branch Campus – Staff SW**

* hostname branch-staff-SW1
* vlan 90
* name Staff
* int range fa0/1-24
* switchport mode access
* switchport access vlan 90
* description ## Staff Dept ##
* do show vlan brief

**Branch Campus – Student Lab SW**

* hostname branch-std.lab-SW1
* vlan 100
* name Branch.Std.Lab
* int range fa0/1-24
* switchport mode access
* switchport access vlan 100
* description ## Students Lab ##
* do show vlan brief

**VLANs – Layer 3 Switches**

**Main Campus**

* enable
* conf t
* hostname main-ABC-SW1
* vlan 10
* name Admin
* int g1/0/2
* switchport mode access
* switchport access vlan 10
* vlan 20
* name HR
* int g1/0/3
* switchport mode access
* switchport access vlan 20
* vlan 30
* name Finance
* int g1/0/4
* switchport mode access
* switchport access vlan 30
* vlan 40
* name Business
* int g1/0/5
* switchport mode access
* switchport access vlan 40
* vlan 50
* name ENG&COM
* int g1/0/6
* switchport mode access
* switchport access vlan 50
* vlan 60
* name ART&DES
* int g1/0/7
* switchport mode access
* switchport access vlan 60
* vlan 70
* name STU.LAB
* int g1/0/8
* switchport mode access
* switchport access vlan 70
* vlan 80
* name IT.DEPT
* int g1/0/9
* switchport mode access
* switchport access vlan 80
* int g1/0/1
* description ## Main Campus Trunk ##
* switchport mode trunk
* switchport trunk allowed vlan 10,20,30,40,50,60,70,80

**Branch Campus**

* enable
* conf t
* hostname branch-SW1
* vlan 90
* name Staff
* int g1/0/2
* switchport mode access
* switchport access vlan 90
* vlan 100
* name Branch.Std.Lab
* int g1/0/3
* switchport mode access
* switchport access vlan 100
* int g1/0/1
* description ## Branch Trunk ##
* switchport mode trunk
* switchport trunk allowed vlan 90,100

**Router Sub-Interfaces & DHCP Pools**

**Branch-Campus R1**

* enable
* conf t
* ! Sub-Interfaces
* int g0/0.90
* encapsulation dot1Q 90
* ip address 192.168.9.1 255.255.255.0
* int g0/0.100
* encapsulation dot1Q 100
* ip address 192.168.10.1 255.255.255.0
* ! DHCP Pools
* service dhcp
* ip dhcp pool Staff-Pool
* network 192.168.9.0 255.255.255.0
* default-router 192.168.9.1
* dns-server 192.168.9.1
* ip dhcp pool STDLAB-Pool
* network 192.168.10.0 255.255.255.0
* default-router 192.168.10.1
* dns-server 192.168.10.1

**Main-Campus R1**

* enable
* conf t
* ! Sub-Interfaces
* int g0/0.10
* encapsulation dot1Q 10
* ip address 192.168.1.1 255.255.255.0
* int g0/0.20
* encapsulation dot1Q 20
* ip address 192.168.2.1 255.255.255.0
* int g0/0.30
* encapsulation dot1Q 30
* ip address 192.168.3.1 255.255.255.0
* int g0/0.40
* encapsulation dot1Q 40
* ip address 192.168.4.1 255.255.255.0
* int g0/0.50
* encapsulation dot1Q 50
* ip address 192.168.5.1 255.255.255.0
* int g0/0.60
* encapsulation dot1Q 60
* ip address 192.168.6.1 255.255.255.0
* int g0/0.70
* encapsulation dot1Q 70
* ip address 192.168.7.1 255.255.255.0
* int g0/0.80
* encapsulation dot1Q 80
* ip address 192.168.8.1 255.255.255.0
* ! DHCP Pools
* service dhcp
* ip dhcp pool Admin-Pool
* network 192.168.1.0 255.255.255.0
* default-router 192.168.1.1
* dns-server 192.168.1.1
* ip dhcp pool HR-Pool
* network 192.168.2.0 255.255.255.0
* default-router 192.168.2.1
* dns-server 192.168.2.1
* ip dhcp pool Finance-Pool
* network 192.168.3.0 255.255.255.0
* default-router 192.168.3.1
* dns-server 192.168.3.1
* ip dhcp pool Business-Pool
* network 192.168.4.0 255.255.255.0
* default-router 192.168.4.1
* dns-server 192.168.4.1
* ip dhcp pool Eng&Comp-Pool
* network 192.168.5.0 255.255.255.0
* default-router 192.168.5.1
* dns-server 192.168.5.1
* ip dhcp pool Art&Des-Pool
* network 192.168.6.0 255.255.255.0
* default-router 192.168.6.1
* dns-server 192.168.6.1
* ip dhcp pool STD.LAB-Pool
* network 192.168.7.0 255.255.255.0
* default-router 192.168.7.1
* dns-server 192.168.7.1
* ip dhcp pool IT.DEPT-Pool
* network 192.168.8.0 255.255.255.0
* default-router 192.168.8.1
* dns-server 192.168.8.1

**RIP Configuration**

**Branch-Campus R1**

* enable
* conf t
* router rip
* version 2
* network 192.168.9.0
* network 192.168.10.0
* network 10.10.10.0

**Main-Campus R1**

* enable
* conf t
* router rip
* version 2
* network 192.168.1.0
* network 192.168.2.0
* network 192.168.3.0
* network 192.168.4.0
* network 192.168.5.0
* network 192.168.6.0
* network 192.168.7.0
* network 192.168.8.0
* network 10.10.10.0

**Cloud-R1**

* enable
* conf t
* router rip
* version 2
* network 10.10.10.0
* network 20.0.0.0