<u>Lab 1</u>

Static Route Configuration

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IP addresses and apply static routes in both routers and confirm the network is functioning between the two PCs.

Diagram:



AR1

System-view

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Interface g0/0/0

Undo shutdown

Ip address 10.0.0.1 255.0.0.0

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Interface g0/0/1

Undo shutdown

Ip address 15.0.0.1 255.0.0.0

Quit

Ip route-static 20.0.0.0 255.0.0.0 15.0.0.2

Verification:

<u>Lab 2</u>

Default Route Configuration

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IP addresses and apply default route configuration in both routers and confirm the network is functioning between the two PCs.

Diagram:



AR1

System-view

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Interface g0/0/0

Undo shutdown

Ip address 10.0.0.1 255.0.0.0

!

Undo shutdown

Ip address 15.0.0.1 255.0.0.0

Quit

Ip route-static 0.0.0.0 0.0.0.0 15.0.0.2

Verification:

<u>Lab 3</u>

<u>RIP</u>

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IP addresses and apply RIP configuration in both routers and confirm the network is functioning between the two PCs.

Diagram:



AR1

System-view

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Interface g0/0/0

Undo shutdown

Ip address 10.0.0.1 255.0.0.0

!

Undo shutdown

Ip address 15.0.0.1 255.0.0.0

Quit

Rip

Network 10.0.0.0

Network 15.0.0.0

Verification:

<u>Lab 4</u>

OSPF Multiple Areas

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IP addresses and apply OSPF configuration in both routers and confirm the network is functioning between the two PCs. Make Sure Network 10.0.0.0 & 15.0.0.0 in Area 0 while 20.0.0.0 in Area 1

Diagram:



AR1

System-view

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Interface g0/0/0

Undo shutdown

Ip address 10.0.0.1 255.0.0.0

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Interface g0/0/1

Undo shutdown

Ip address 15.0.0.1 255.0.0.0

Quit

OSPF 1

Area 0

Network 10.0.0.0 0.255.255.255

Network 15.0.0.0 0.255.255.255

Verification:

<u>Lab 5</u>

BGP Configuration

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IP addresses and apply BGP configuration in both routers and confirm the network is functioning between the two PCs. Make Sure The first router to be in AS 100 while the second router to be in AS 200

Diagram:



AR1

System-view

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Interface g0/0/0

Undo shutdown

Ip address 10.0.0.1 255.0.0.0

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Undo shutdown

Ip address 15.0.0.1 255.0.0.0

Quit

BGP 100

Peer 15.0.0.2 as-number 200

Network 10.0.0.0

Network 15.0.0.0

Verification:

<u>Lab 6</u>

Inter-vlan Routing

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IP addresses and apply Vlan configuration in both Switches and the router confirm the network is functioning between the four PCs.

Diagram:



SW1/SW2

System-view

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Vlan 2

Quit

Vlan 3

Quit

!

Int g0/0/2

Port link-type access

Port default vlan 2

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Int g0/0/3

Port link-type access

Port default vlan 3

!

Int g0/0/4

Port link-type trunk

Port trunk allow-pass vlan 2 to 3

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Int g0/0/1

Port link-type trunk

Port trunk allow-pass vlan 2 to 3

ļ

!R1

Vlan 2

Quit

Vlan 3

Quit

!

Int e0/0/0

Port link-type trunk

Port trunk allow-pass vlan 2 to 3

ļ

Int vlanif 2

Ip address 10.0.0.1 255.0.0.0

Undo shutdown

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Int vlanif 3

Ip address 20.0.0.1 255.0.0.0

Undo shutdown

Verification:

<u>Lab 7</u>

Access Control List

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IP addresses and apply RIP configuration in both routers and confirm the network is functioning between the two PCs. Then make ACL in R1 that denies traffic from 10.0.0.2 to 20.0.0.2 and permits everything else.

Diagram:



AR1

System-view

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Interface g0/0/0

Undo shutdown

Ip address 10.0.0.1 255.0.0.0

ļ

Interface g0/0/1

Undo shutdown

Ip address 15.0.0.1 255.0.0.0

Quit

Rip

Network 10.0.0.0

Network 15.0.0.0

!

acl 3001

rule 10 deny icmp source 10.0.0.2 0.0.0.0 destination any

rule 20 permit ip source any destination any

!

int g0/0/0

traffic-filter inbound acl 3001

Verification:

Ensure the ping is working only between the 10.0.0.2 & 20.0.0.2

<u>Lab 8</u>

<u>DHCP</u>

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IP addresses and apply DHCP Configuration in the router to advertise IP addresses in the range of 10.0.0.0 network.

Diagram:



System-view

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Interface g0/0/0

Undo shutdown

Ip address 10.0.0.1 255.255.0.0

ļ

Dhcp enable

!

Ip pool 1

Network 10.0.0.0 mask 255.255.0.0

Gateway-list 10.0.0.1

Excluded-address 10.0.0.2 10.0.0.100

ļ

Interface g0/0/0

Dhcp select global

Verification:

Ensure the PCs got their IP addresses from the DHCP.

<u>Lab 9</u>

<u>IPv6</u>

Task 1:

Connect the below network using Huawei Equipment, and assign the depicted IPv6 addresses and apply RIPng configuration in both routers and confirm the network is functioning between the two PCs

Diagram:



AR1

System-view

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IPv6

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Undo shutdown

Ipv6 enable

Ipv6 address 2001::1/64

Ripng 100 enable

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Interface g0/0/1

Undo shutdown

Ipv6 enable

Ipv6 address 2003::1/64

Ripng 100 enable

Verification:

Ensure the ping is working