Настройка внешнего IPv4-адреса:

Router# config

Router(config)# interface WAN1

Router(config-if)# ip address 9.192.255.250 255.192.0.0

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# ip route 0.0.0.0 0.0.0.0 9.192.0.1

Router(config)# end

Router# write memory

Настройка VLAN и внутренних IPv4-адресов:

Router # config

Router(config)# vlan 10

Router(config-vlan)# name Admin

Router(config-vlan)# exit

Router(config)# vlan 20

Router(config-vlan)# name Faculty

Router(config-vlan)# exit

Router(config)# vlan 30

Router(config-vlan)# name Students

Router(config-vlan)# exit

Router(config)# vlan 40

Router(config-vlan)# name Peripherals

Router(config-vlan)# exit

Router(config)# vlan 50

Router(config-vlan)# name Mobile

Router(config-vlan)# exit

Router(config)# interface LAN1.10

Router(config-if)# ip address 192.168.100.1 255.255.255.224

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# interface LAN1.20

Router(config-if)# ip address 192.168.100.33 255.255.255.224

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# interface LAN1.30

Router(config-if)# ip address 192.168.100.65 255.255.255.192

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# interface LAN1.40

Router(config-if)# ip address 192.168.100.129 255.255.255.224

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# interface LAN1.50

Router(config-if)# ip address 192.168.100.161 255.255.255.192

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# end

Router# write memory

Настройка DHCP для IPv4:

Router# config

Router(config)# ip dhcp pool Admin\_pool

Router(dhcp-config)# network 192.168.100.0 255.255.255.224

Router(dhcp-config)# default-router 192.168.100.1

Router(dhcp-config)# dns-server 8.8.8.8 8.8.4.4

Router(dhcp-config)# exit

Router(config)# ip dhcp pool Faculty\_pool

Router(dhcp-config)# network 192.168.100.32 255.255.255.224

Router(dhcp-config)# default-router 192.168.100.33

Router(dhcp-config)# dns-server 8.8.8.8 8.8.4.4

Router(dhcp-config)# exit

Router(config)# ip dhcp pool Students\_pool

Router(dhcp-config)# network 192.168.100.64 255.255.255.192

Router(dhcp-config)# default-router 192.168.100.65

Router(dhcp-config)# dns-server 8.8.8.8 8.8.4.4

Router(dhcp-config)# exit

Router(config)# ip dhcp pool Peripherals\_pool

Router(dhcp-config)# network 192.168.100.128 255.255.255.224

Router(dhcp-config)# default-router 192.168.100.129

Router(dhcp-config)# dns-server 8.8.8.8 8.8.4.4

Router(dhcp-config)# exit

Router(config)# ip dhcp pool Mobile\_pool

Router(dhcp-config)# network 192.168.100.160 255.255.255.192

Router(dhcp-config)# default-router 192.168.100.161

Router(dhcp-config)# dns-server 8.8.8.8 8.8.4.4

Router(dhcp-config)# exit

Router(config)# end

Router# write memory

Настройка IPv6:

Router# config

Router(config)# ipv6 unicast-routing

Router(config)# interface LAN1.20

Router(config-if)# ipv6 address 2a03:3000:20::1/64

Router(config-if)# ipv6 enable

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# interface LAN1.30

Router(config-if)# ipv6 address 2a03:3000:30::1/64

Router(config-if)# ipv6 enable

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# interface LAN1.40

Router(config-if)# ipv6 address 2a03:3000:40::1/64

Router(config-if)# ipv6 enable

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# interface LAN1.50

Router(config-if)# ipv6 address 2a03:3000:50::1/64

Router(config-if)# ipv6 enable

Router(config-if)# no shutdown

Router(config-if)# exit

Router(config)# end

Router# write memory

Настройка DHCPv6:

Router# config

Router(config)# ipv6 dhcp pool Faculty\_pool\_v6

Router(dhcpv6-config)# address-prefix 2a03:3000:20::/64

Router(dhcpv6-config)# dns-server 2001:4860:4860::8888 2001:4860:4860::8844

Router(dhcpv6-config)# exit

Router(config)# ipv6 dhcp pool Students\_pool\_v6

Router(dhcpv6-config)# address-prefix 2a03:3000:30::/64

Router(dhcpv6-config)# dns-server 2001:4860:4860::8888 2001:4860:4860::8844

Router(dhcpv6-config)# exit

Router(config)# ipv6 dhcp pool Peripherals\_pool\_v6

Router(dhcpv6-config)# address-prefix 2a03:3000:40::/64

Router(dhcpv6-config)# dns-server 2001:4860:4860::8888 2001:4860:4860::8844

Router(dhcpv6-config)# exit

Router(config)# ipv6 dhcp pool Mobile\_pool\_v6

Router(dhcpv6-config)# address-prefix 2a03:3000:50::/64

Router(dhcpv6-config)# dns-server 2001:4860:4860::8888 2001:4860:4860::8844

Router(dhcpv6-config)# exit

Router(config)# end

Router# write memory

Настройка удаленного администрирования:

Router# config

Router(config)# ip ssh version 2

Router(config)# ip ssh authentication-retries 3

Router(config)# ip ssh timeout 120

Router(config)# line vty 0 4

Router(config-line)# login local

Router(config-line)# transport input ssh

Router(config-line)# exit

Router(config)# no service telnet

Router(config)# end

Router# write memory

Защита от DDoS-атак:

Router# config

Router(config)# ip rate-limit input 1000

Router(config)# end

Router# write memory

Настройка межсетевого экрана:

Router# config

Router(config)# ip access-list extended OUTBOUND

Router(config-ext-nacl)# permit ip any any

Router(config-ext-nacl)# exit

Router(config)# ip access-list extended INBOUND

Router(config-ext-nacl)# deny ip any any

Router(config-ext-nacl)# exit

Router(config)# interface WAN1

Router(config-if)# ip access-group INBOUND in

Router(config-if)# ip access-group OUTBOUND out

Router(config-if)# exit

Router(config)# end

Router# write memory

Настройка списков контроля доступа (ACL) для SSH и веб-интерфейса:

Router(config)# ip access-list extended SSH\_ACCESS

Router(config-ext-nacl)# permit tcp 192.168.100.0/27 eq 22

Router(config-ext-nacl)# deny tcp any eq 22

Router(config-ext-nacl)# exit

Router(config)# interface WAN1

Router(config-if)# ip access-group SSH\_ACCESS in

Router(config-if)# exit

Router(config)# ip access-list extended WEB\_ACCESS

Router(config-ext-nacl)# permit tcp 192.168.100.0/27 eq 80

Router(config-ext-nacl)# permit tcp 192.168.100.0/27 eq 443

Router(config-ext-nacl)# deny tcp any eq 80

Router(config-ext-nacl)# deny tcp any eq 443

Router(config-ext-nacl)# exit

Router(config)# interface WAN1

Router(config-if)# ip access-group WEB\_ACCESS in

Router(config-if)# exit

Router(config)# end

Router# write memory