

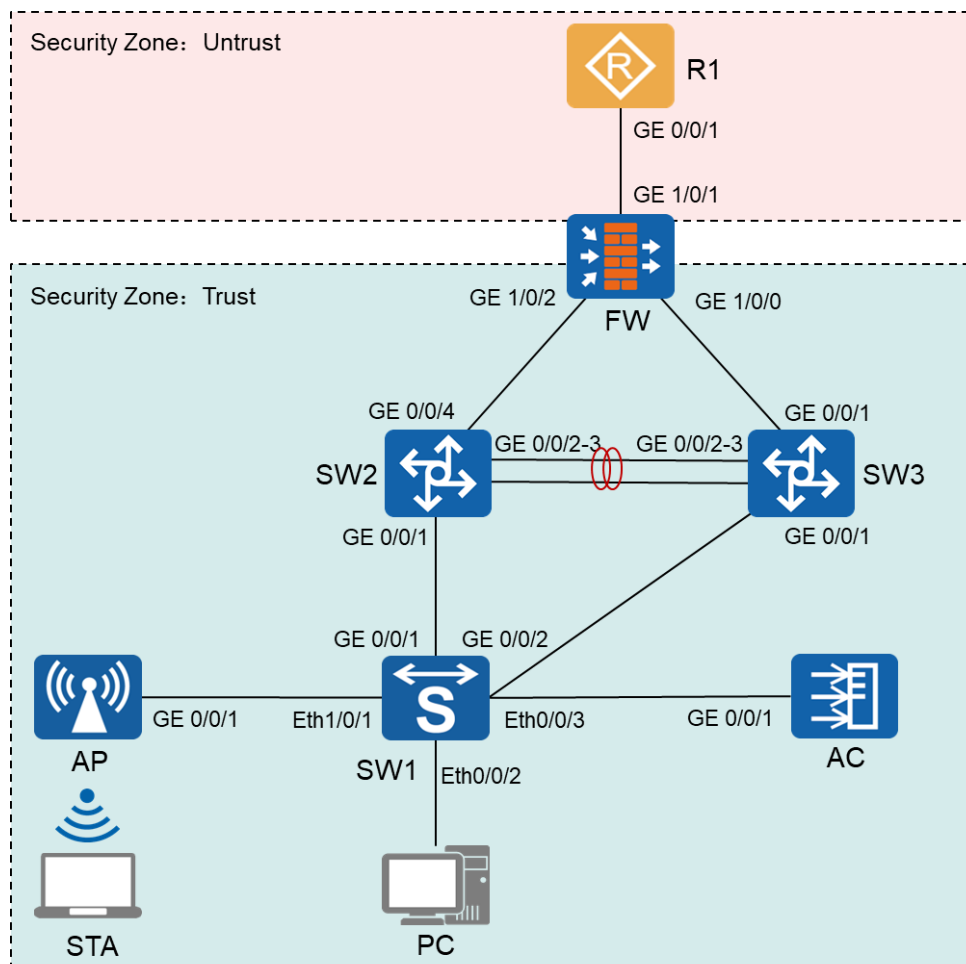
Huawei ICT Competition National Final Mock Exam B

(eNSP)

1 Background

As shown in the topology of an enterprise network, there are three parts: security, route switching, and wireless. Please configure according to enterprise requirements.

2 Integrated network topology



Picture 2-1 Experimental topology

3 VLAN & IP address planning table

Table 3-1 IP address planning table

Device	Interface	IP address
AC	VLANif 10	192.168.1.200/24
	VLANif 20	192.168.2.200/24
SW1	VLANif 10	192.168.1.1/24
	VLANif 20	192.168.2.1/24
SW2	VLANif 10	192.168.1.21/24
	VLANif 30	192.168.3.1/24
SW3	VLANif 10	192.168.1.31/24
	VLANif 40	192.168.4.1/24
FW	G1/0/0	192.168.4.2/24
	G1/0/1	1.1.1.1/24
	G1/0/2	192.168.3.2/24
R1	G0/0/1	1.1.1.2/24

Table 3-2 Device login information table

Device name	Management address	User	Password
Firewall	192.168.0.1:8443	admin	huawei@123

3.1 IP Address

Please follow the address information given in the exam planning topology and IP address planning table to connect and configure the IP addresses of the corresponding network devices and interfaces.

3.2 VLAN

VLAN port division:

- The Eth0/0/1 port of SW1 is a trunk, which belongs to VLAN10 and allows VLAN10 to pass.
 - The Eth0/0/2 port of SW1 is access and belongs to VLAN10.
 - The Eth0/0/3 port of SW1 is a trunk and allows VLAN 10 20 to pass
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- The G0/0/4 port of SW2 is a trunk, which belongs to VLAN30 and allows VLAN all to pass.
- The G0/0/4 port of SW3 is a trunk, which belongs to VLAN40 and allows VLAN all to pass.

3.3 Link Aggregation

Create Eth-trunk: Create link aggregation with the name 1 on SW2 and SW3. SW2 and SW3 are aggregated through G0/0/2 and G0/0/3 links. Configure this to work in static LACP mode and allows VLAN all to pass.

3.4 RSTP

RSTP is enabled on SW1, SW2, and SW3, and SW1 is set as the root primary.

Set the Eth0/0/2 port of SW1 as the edge port.

3.5 OSPF

Deploy OSPF on SW1, SW2, SW3, and FW (Global process number 1, area 0):

- Network VLANif 10, VLANif 20 on SW1;
- Network VLANif 10, VLANif 30 on SW2;
- Network VLANif 10, VLANif 40 on SW3;
- Network G1/0/2 and G1/0/0 on FW, and introduce an external default route.

3.6 IP route-static

Configure a default static route on the firewall FW. The next hop address is 1.1.1.2.

Configure a default static route on the R1. The next hop address is 1.1.1.1.

3.7 Security

Security configuration:

- Add G1/0/2 and G1/0/0 to the trusted port.
 - Add G1/0/1 to the untrusted port.
 - Allow ping command to access the device.
 - Create a security policy called OSPF, release OSPF traffic.
 - Create a security policy named out, and release the wandering from the source 192.168.1.0/24 to the external network;
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- Configure private network users to access the internet through easy ip with policy name "easyip".

3.8 WLAN

3.8.1 DHCP

Table 3-3 WLAN DHCP allocation table

Project	Data
AP Management VLAN	VLAN 20
STA Service VLAN	VLAN 10
AC	Create IP address pool dhcp as the AC address specified by update option 43 is 192.168.2.200, Create IP address pool dhcp2 :192.168.1.0/24, The default gateway of the STA is 192.168.1.1.
Ap-group	Name: ap Reference template: VAP template Administrative domain template
Regulatory domain profile	Name: domain Country code: CN
IP address pool of the AP	192.168.2.0/24
IP address pool of the STA	192.168.1.0/24 (Except 192.168.1.21 and 192.168.1.31)
Source IP address of the AC	VLANif 20

3.8.2 AP on-line configuration

Configure the WLAN management VLAN.

Configure AP authentication mode as MAC address authentication.

3.8.3 Configuration and Delivery

Configure WLAN service parameters to implement STA access to the WLAN network. All template names are **employee**.

Configure the security policy of WPA. The password is **huawei123**.

The SSID is **employee** and the service forwarding mode is direct forwarding.

4 Verification

After all the configuration is completed, sta1 and pc will be able to automatically obtain the IP address, and the pc can ping internet.