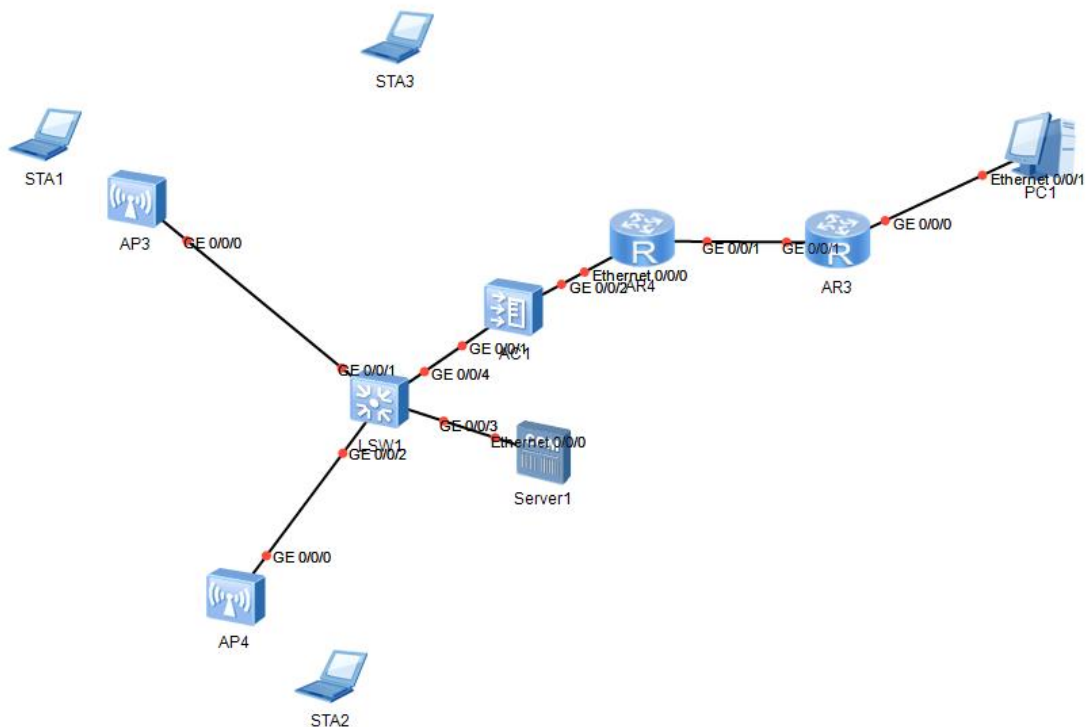


Лабораторная работа №9

Топология:



Конфигурация PC1:

PC1

Basic Config Command MCPacket UdpPacket Console

Host Name:

MAC Address:

IPv4 Configuration

☒ Static ☐ DHCP ☐ Obtain DNS server address automatically

IP Address: DNS1:

Subnet Mask: DNS2:

Gateway:

IPv6 Configuration

☒ Static ☐ DHCPv6

IPv6 Address:

Prefix Length:

IPv6 Gateway:

Apply

Конфигурация AR3:

```
AR3
The device is running!
#####
#####
<Ibraev_ISP>
<Ibraev_ISP>ena
^
Error: Unrecognized command found at '^' position.
<Ibraev_ISP>sys
<Ibraev_ISP>system-view
Enter system view, return user view with Ctrl+Z.
[Ibraev_ISP]dis
[Ibraev_ISP]display ip int
[Ibraev_ISP]display ip interface br
[Ibraev_ISP]display ip interface brief
*down: administratively down
^down: standby
(l): loopback
(s): spoofing
The number of interface that is UP in Physical is 1
The number of interface that is DOWN in Physical is 2
The number of interface that is UP in Protocol is 1
The number of interface that is DOWN in Protocol is 2

Interface                               IP Address/Mask      Physical  Protocol
GigabitEthernet0/0/0                   7.5.21.5/30          down      down
GigabitEthernet0/0/1                   7.5.21.2/30          down      down
NULL0                                  unassigned           up        up(s)
[Ibraev_ISP]
```

```
[Ibraev_ISP]display ip routing-table
Route Flags: R - relay, D - download to fib
-----
Routing Tables: Public
      Destinations : 4          Routes : 4

Destination/Mask    Proto    Pre  Cost    Flags NextHop         Interface
127.0.0.0/8         Direct   0    0        D  127.0.0.1       InLoopBack0
127.0.0.1/32        Direct   0    0        D  127.0.0.1       InLoopBack0
127.255.255.255/32  Direct   0    0        D  127.0.0.1       InLoopBack0
255.255.255.255/32  Direct   0    0        D  127.0.0.1       InLoopBack0
[Ibraev_ISP]
```

AR4:

```

AR4
AC1  AR4
<Ibraev_R>display ip interface brief
*down: administratively down
^down: standby
(l): loopback
(s): spoofing
The number of interface that is UP in Physical is 5
The number of interface that is DOWN in Physical is 1
The number of interface that is UP in Protocol is 4
The number of interface that is DOWN in Protocol is 2

Interface                IP Address/Mask      Physical  Protocol
GigabitEthernet0/0/0      unassigned           down      down
GigabitEthernet0/0/1      7.5.21.1/30          up        up
NULL0                    unassigned           up        up(s)
Vlanif10                  unassigned           up        down
Vlanif20                  30.5.20.2/24         up        up
Vlanif30                  30.5.30.2/24         up        up
<Ibraev_R>display ip routing-table
Route Flags: R - relay, D - download to fib
-----
Routing Tables: Public
      Destinations : 14          Routes : 14

Destination/Mask    Proto  Pre  Cost    Flags NextHop          Interface
0.0.0.0/0           Static 60   0        RD   7.5.21.2      GigabitEthernet
0/0/1
7.5.21.0/30         Direct 0    0         D   7.5.21.1      GigabitEthernet
0/0/1
7.5.21.1/32         Direct 0    0         D   127.0.0.1     GigabitEthernet

```

```

-----
Routing Tables: Public
      Destinations : 14          Routes : 14

Destination/Mask    Proto  Pre  Cost    Flags NextHop          Interface
0.0.0.0/0           Static 60   0        RD   7.5.21.2      GigabitEthernet
0/0/1
7.5.21.0/30         Direct 0    0         D   7.5.21.1      GigabitEthernet
0/0/1
7.5.21.1/32         Direct 0    0         D   127.0.0.1     GigabitEthernet
0/0/1
7.5.21.3/32         Direct 0    0         D   127.0.0.1     GigabitEthernet
0/0/1
30.5.20.0/24        Direct 0    0         D   30.5.20.2      Vlanif20
30.5.20.2/32        Direct 0    0         D   127.0.0.1     Vlanif20
30.5.20.255/32      Direct 0    0         D   127.0.0.1     Vlanif20
30.5.30.0/24        Direct 0    0         D   30.5.30.2      Vlanif30
30.5.30.2/32        Direct 0    0         D   127.0.0.1     Vlanif30
30.5.30.255/32      Direct 0    0         D   127.0.0.1     Vlanif30
127.0.0.0/8         Direct 0    0         D   127.0.0.1     InLoopBack0
127.0.0.1/32        Direct 0    0         D   127.0.0.1     InLoopBack0
127.255.255.255/32  Direct 0    0         D   127.0.0.1     InLoopBack0
255.255.255.255/32  Direct 0    0         D   127.0.0.1     InLoopBack0
<Ibraev_R>

```

Switch:

| LSW1 | | | | | |
|-------------|--------|----------------|--------------|--------------|--------------|
| LSW1 | | | | | |
| VID | Type | Ports | | | |
| 1 | common | UT:GE0/0/4 (U) | GE0/0/5 (D) | GE0/0/6 (D) | GE0/0/7 (D) |
| | | GE0/0/8 (D) | GE0/0/9 (D) | GE0/0/10 (D) | GE0/0/11 (D) |
| | | GE0/0/12 (D) | GE0/0/13 (D) | GE0/0/14 (D) | GE0/0/15 (D) |
| | | GE0/0/16 (D) | GE0/0/17 (D) | GE0/0/18 (D) | GE0/0/19 (D) |
| | | GE0/0/20 (D) | GE0/0/21 (D) | GE0/0/22 (D) | GE0/0/23 (D) |
| | | GE0/0/24 (D) | | | |
| | | TG:GE0/0/1 (D) | GE0/0/2 (D) | GE0/0/3 (D) | |
| 10 | common | UT:GE0/0/1 (D) | GE0/0/2 (D) | | |
| | | TG:GE0/0/3 (D) | GE0/0/4 (U) | | |
| 20 | common | TG:GE0/0/1 (D) | GE0/0/2 (D) | GE0/0/3 (D) | GE0/0/4 (U) |
| 30 | common | UT:GE0/0/3 (D) | | | |
| | | TG:GE0/0/1 (D) | GE0/0/2 (D) | GE0/0/4 (U) | |
| VID | Status | Property | MAC-LRN | Statistics | Description |
| 1 | enable | default | enable | disable | VLAN 0001 |
| 10 | enable | default | enable | disable | VLAN 0010 |
| 20 | enable | default | enable | disable | VLAN 0020 |
| 30 | enable | default | enable | disable | VLAN 0030 |
| [Ibraev_SW] | | | | | |

Server:

Server1

Basic Config

Server Info

Log Info

MAC Address:

54-89-98-FD-23-1F

(Format:00-01-02-03-04-05)

IPv4 Config

Local Address:

30 . 5 . 30 . 200

Subnet Mask:

255 . 255 . 255 . 0

Gateway:

30 . 5 . 30 . 1

DNS:

0 . 0 . 0 . 0

Ping Test

IPv4 Address:

0 . 0 . 0 . 0

Times:

Send

Local State:

Device Shutdown

Ping Success:0

Failed:0

Save

Server1

Basic Config

Server Info

Log Info

DNSServer

FtpServer

HttpServer

Service

Port:

53

Start

Stop

Configuration

HostName:

IP Address:

.

.

.

Add

Update

Delete

| HostName | IP Address |
|-----------|------------|
| ibraev.ru | 7.5.21.6 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

AC1:

```
<Ibraev_AC>display vlan brief
U:Up;D:Down;TG:Tagged;UT:Untagged;
```

| VID | Name | Status | Ports |
|-----|------|--------|--|
| 1 | | enable | UT: GE0/0/1(U) GE0/0/2(U) GE0/0/3(D) GE0/0/4(D) GE0/0/5(D) GE0/0/6(D) GE0/0/7(D) GE0/0/8(D) |
| 10 | | enable | TG: GE0/0/1(U) GE0/0/2(U) |
| 20 | | enable | TG: GE0/0/1(U) GE0/0/2(U) Wlan-Dbss0(U) Wlan-Dbss1(U) |
| 30 | | enable | TG: GE0/0/1(U) GE0/0/2(U) |

```
<Ibraev_AC>
```

```
#
interface Vlanif10
 ip address 30.5.10.1 255.255.255.0
 dhcp select interface
 dhcp server excluded-ip-address 30.5.10.1 30.5.10.5
```

```
#
interface Vlanif20
 ip address 30.5.20.1 255.255.255.0
 dhcp select interface
 dhcp server excluded-ip-address 30.5.20.1 30.5.20.5
 dhcp server dns-list 30.5.30.200
```

```
#
interface Vlanif30
 ip address 30.5.30.1 255.255.255.0
#
```

```
interface Vlanif30
 ip address 30.5.30.1 255.255.255.0
#
interface GigabitEthernet0/0/1
 port link-type trunk
 port trunk allow-pass vlan 10 20 30
#
interface GigabitEthernet0/0/2
 port link-type trunk
 port trunk allow-pass vlan 10 20 30
#
```

```

#
wlan
  traffic-profile name default
  security-profile name default
  security-profile name Security1
    security wpa2 psk pass-phrase %^%#2V/'17h8_>huQw-6h=)1^9mdL>JTDYo!DE#E#n8P%^%#
  aes
  security-profile name default-wds
  security-profile name default-mesh
  security-profile name EbraevSecurity
    security wpa2 psk pass-phrase %^%#fVrXP7'}ZDzqy67Z5`n=CjIn~r23)Rn)xz6f)BU&%^%#
  aes
  ssid-profile name default
  ssid-profile name Ebraev_profile/ssid
    ssid EbraevSSID
  vap-profile name default
  vap-profile name Ebraev_profill/vap
  vap-profile name Ebraev_profil2/vap
  vap-profile name Ebraev_profile/vap
    service-vlan vlan-id 20
    security-profile EbraevSecurity
  wds-profile name default
  mesh-handover-profile name default
  mesh-profile name default
  regulatory-domain-profile name default
  regulatory-domain-profile name EbraevReg
  regulatory-domain-profile name EbraevReg1
  air-scan-profile name default
  rrm-profile name default
  radio-2g-profile name default
  radio-5g-profile name default
  wids-spoof-profile name default
  wids-profile name default
  wireless-access-specification
  ap-system-profile name default
  port-link-profile name default
  wired-port-profile name default
  serial-profile name preset-enjoyor-toeap
  ap-group name default
  ap-group name EbraevGroup
    radio 0
      vap-profile Ebraev_profile/vap wlan 1
    ap-group name EbraevGroup1
      regulatory-domain-profile EbraevReg1
      radio 1
        vap-profile Ebraev_profile/vap wlan 2
  ap-id 0 type-id 58 ap-mac 00e0-fcdc-6280 ap-sn 2102354483106662B74E
    ap-name EbraevAP0
    ap-group EbraevGroup
  ap-id 1 type-id 58 ap-mac 00e0-fc30-5b20 ap-sn 21023544831056280B40
    ap-name EbraevAP1
    ap-group EbraevGroup1
  provision-ap
#
dot1x-access-profile name dot1x_access_profile

```

```

<Ibraev_AC>display ip pool interface Vlanif10
Pool-name       : Vlanif10
Pool-No         : 0
Lease           : 1 Days 0 Hours 0 Minutes
Domain-name     : -
DNS-server0     : -
NBNS-server0    : -
Netbios-type    : -
Position        : Interface      Status          : Unlocked
Gateway-0       : -
Network         : 30.5.10.0
Mask            : 255.255.255.0
Logging         : Disable
Conflicted address recycle interval: -
Address Statistic: Total       :254      Used       :2
                  Idle        :247      Expired    :0
                  Conflict    :0        Disabled   :5
-----
Network section
      Start      End      Total      Used Idle(Expired) Conflict Disabled
-----
      30.5.10.1   30.5.10.254   254        2      247(0)      0      5
-----
<Ibraev_AC>

```

```

<Ibraev_AC>display ip pool interface Vlanif20
Pool-name       : Vlanif20
Pool-No         : 1
Lease           : 1 Days 0 Hours 0 Minutes
Domain-name     : -
DNS-server0     : 30.5.30.200
NBNS-server0    : -
Netbios-type    : -
Position        : Interface      Status          : Unlocked
Gateway-0       : -
Network         : 30.5.20.0
Mask            : 255.255.255.0
Logging         : Disable
Conflicted address recycle interval: -
Address Statistic: Total       :254      Used       :2
                  Idle        :247      Expired    :0
                  Conflict    :0        Disabled   :5
-----
Network section
      Start      End      Total      Used Idle(Expired) Conflict Disabled
-----
      30.5.20.1   30.5.20.254   254        2      247(0)      0      5
-----
<Ibraev_AC>

```



```

<Ibraev_AC>display ap all
Info: This operation may take a few seconds. Please wait for a moment.done.
Total AP information:
nor : normal          [2]
-----
ID   MAC              Name      Group      IP          Type      State STA
Uptime
-----
0    00e0-fcdc-6280 EbraevAP0 EbraevGroup 30.5.10.219 AP7050DE   nor    1
14M:35S
1    00e0-fc30-5b20 EbraevAP1 EbraevGroup1 30.5.10.40  AP7050DE   nor    1
14M:50S
-----
Total: 2
<Ibraev_AC>

```

AC1

```

-----
Total: 2
<Ibraev_AC>ddis
<Ibraev_AC>dis
<Ibraev_AC>display ip ro
<Ibraev_AC>display ip routing-table
Route Flags: R - relay, D - download to fib
-----
Routing Tables: Public
      Destinations : 14      Routes : 14

Destination/Mask    Proto    Pre  Cost    Flags NextHop        Interface
-----
0.0.0.0/0          Static   60   0        RD   30.5.20.2        Vlanif20
30.5.10.0/24       Direct   0     0         D   30.5.10.1        Vlanif10
30.5.10.1/32       Direct   0     0         D   127.0.0.1        Vlanif10
30.5.10.255/32     Direct   0     0         D   127.0.0.1        Vlanif10
30.5.20.0/24       Direct   0     0         D   30.5.20.1        Vlanif20
30.5.20.1/32       Direct   0     0         D   127.0.0.1        Vlanif20
30.5.20.255/32     Direct   0     0         D   127.0.0.1        Vlanif20
30.5.30.0/24       Direct   0     0         D   30.5.30.1        Vlanif30
30.5.30.1/32       Direct   0     0         D   127.0.0.1        Vlanif30
30.5.30.255/32     Direct   0     0         D   127.0.0.1        Vlanif30
127.0.0.0/8        Direct   0     0         D   127.0.0.1        InLoopBack0
127.0.0.1/32       Direct   0     0         D   127.0.0.1        InLoopBack0
127.255.255.255/32 Direct   0     0         D   127.0.0.1        InLoopBack0
255.255.255.255/32 Direct   0     0         D   127.0.0.1        InLoopBack0

<Ibraev_AC>

```

STA2:

STA2

Vap Map

Command

UDP Packet

MAC Address:

54-89-98-50-5A-A9

IPv4 Configuration

Static

☒ DHCP

IP Address:

Subnet Mask:

Gateway:

Vap List

| | SSID | Encription | Status | VAP MAC | Channel | Radio Type |
|--|-------------|------------|-----------|-------------------|---------|------------|
| | HUAWEI-W... | WPA2 | Connected | 00-E0-FC-30-5B-31 | 149 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Connect

Disconnect

Refresh

Apply

STA1:

STA1

Vap Map

Command

UDP Packet

MAC Address:

54-89-98-61-37-87

IPv4 Configuration

Static

☒ DHCP

IP Address:

Subnet Mask:

Gateway:

Vap List

| | SSID | Encription | Status | VAP MAC | Channel | Radio Type |
|--|-------------|------------|-----------|-------------------|---------|------------|
| | HUAWEI-W... | WPA2 | Connected | 00-E0-FC-DC-62-80 | 1 | 802.11bgn |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Connect

Disconnect

Refresh

Apply

STA2

Vap Map Command UDP Packet

```
Request timeout!
From 7.5.21.6: bytes=32 seq=4 ttl=126 time=141 ms
From 7.5.21.6: bytes=32 seq=5 ttl=126 time=125 ms

--- 7.5.21.6 ping statistics ---
 5 packet(s) transmitted
 2 packet(s) received
60.00% packet loss
round-trip min/avg/max = 0/133/141 ms

STA>ping 7.5.21.6

Ping 7.5.21.6: 32 data bytes, Press Ctrl_C to break
Request timeout!
From 7.5.21.6: bytes=32 seq=2 ttl=126 time=140 ms
From 7.5.21.6: bytes=32 seq=3 ttl=126 time=125 ms
From 7.5.21.6: bytes=32 seq=4 ttl=126 time=141 ms
From 7.5.21.6: bytes=32 seq=5 ttl=126 time=141 ms

--- 7.5.21.6 ping statistics ---
 5 packet(s) transmitted
 4 packet(s) received
20.00% packet loss
round-trip min/avg/max = 0/136/141 ms

STA>
```

STA1

Vap Map Command UDP Packet

```
Welcome to use STA Simulator!

STA>Welcome to use STA Simulator!

STA>ping 7.5.21.6

Ping 7.5.21.6: 32 data bytes, Press Ctrl_C to break
From 7.5.21.6: bytes=32 seq=1 ttl=126 time=125 ms
From 7.5.21.6: bytes=32 seq=2 ttl=126 time=125 ms
From 7.5.21.6: bytes=32 seq=3 ttl=126 time=125 ms
From 7.5.21.6: bytes=32 seq=4 ttl=126 time=156 ms
```