

# 知 AC对接虚拟化部署的认证服务器不成功

Portal 谭奇伟 2024-01-10 发表

## 组网及说明

AC旁挂核心，本地转发。

由于认证服务器分为主备，地址分别是72和73，为了接入设备的配置方便，设计为虚拟化后采用统一的地址74与外界通信。

因此AC上配置的radius scheme和portal web-server以及portal server下相关的配置都使用74地址进行对接：

```
#  
radius scheme portal-server  
primary authentication 10.1.6.74  
primary accounting 10.1.6.74  
user-name-format without-domain  
nas-ip 10.10.0.5  
#  
portal web-server portal-server  
url http://10.1.6.74/a79.htm  
#  
portal server portal-server  
ip 10.1.6.74 key cipher $c$3$iMo798Y0l9XnCW7GlzehLgthnee7uefCektWfQ==  
server-type cmcc  
#
```

## 告警信息

无

## 问题描述

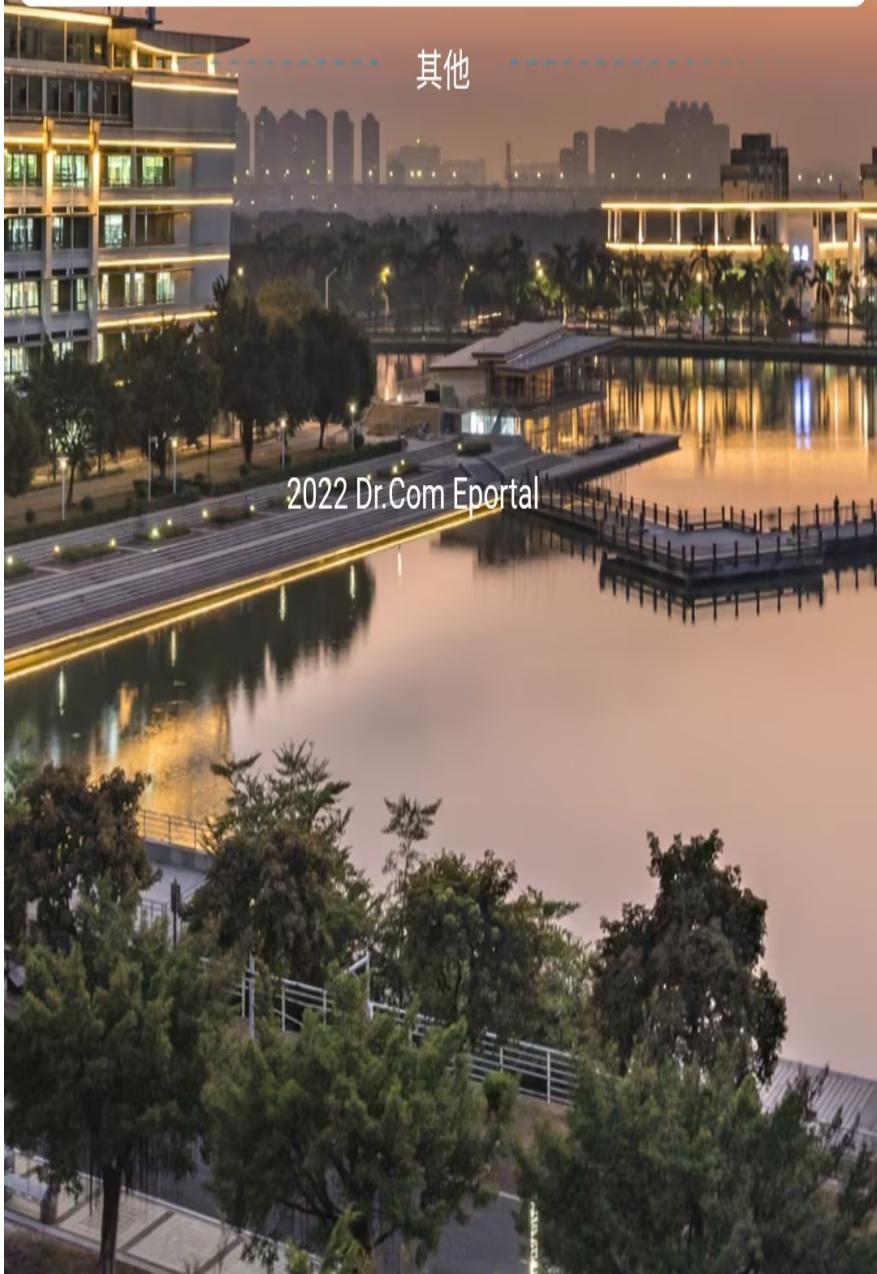
终端连接wifi后弹出的认证页面正常，但是认证失败，终端上认证页面报错如下：



返回

其他

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过程分析

通过AC和服务器之间抓包发现，服务器给AC发送了req\_auth报文，但并未收到AC发起的access requ

est (radius) 报文，也未收到AC发送给服务器的ack\_auth报文：

No.	Time	Source	Destination	Protocol	Length	Info
2638...	42.994346	10.1.6.72	10.10.0.5	Portal	87	REQ_AUTH
2763...	44.993855	10.1.6.72	10.10.0.5	Portal	87	REQ_AUTH
2894...	46.994025	10.1.6.72	10.10.0.5	Portal	87	REQ_AUTH

> Internet Protocol Version 4, Src: 10.1.6.72, Dst: 10.10.0.5  
> User Datagram Protocol, Src Port: 42324, Dst Port: 2000  
▼ Portal Protocol  
    Version: Version 1 (1)  
    Type: REQ\_AUTH (3)  
    Pap/Chap: PAP (1)  
    Rsvd: 0  
    SerialNo: 0xd516  
    ReqID: 0x0000  
    UserIP: 10.100.2.4  
    UserPort: 0x0000  
    ErrCode: 0  
    AttrNum: 2  
    > Attributes:User-Name,Password,  
▼ Lua Error: D:\Wireshark\plugins\4.0\portal.lua:319: Range is out of bounds  
    > [Expert Info (Error/Uncoded): Lua Error: D:\Wireshark\plugins\4.0\portal.lua:319: Range is out of bounds]

通过在AC上debug portal all和debug radius all发现，虽然服务器设计为虚拟化后采用统一的地址74与外界通信，但实际服务器采用72的地址向AC发送了req\_auth报文。

此时由于AC上是按照设计要求配置74的地址与服务器对接，因此在radius scheme，portal server和portal web-server下相关的配置都使用74地址进行对接，因此将源地址为72的服务器发送过来的portal报文识别为无效报文直接丢弃。

16:55:31.195 [root@bzbgw10:10.0.5.20231228\_160027.txt] slot0#flash\_startup.cfg

2786 Dec 28 15:54-15:58:29 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 7ef9-fd16-3af3, IP: 10.100.68.86, 10.100.144.221, 10.101.109.5, 10.101.45.80, Username: 20083642, AP name: TSE-508

2787 Dec 28 15:54-15:58:30 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 7ef9-fd16-3af3, IP: 10.100.57.18, 10.100.68.86, 10.100.144.221, 10.101.109.5, Username: 20083642, AP name: TSE-508

2788 Dec 28 15:54-15:58:30 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 2 ], EventSource = [ 8 ], VLANID = [ 1802 ], BSSIDIndex = [ 4001 ], MAC = [ 7ef9-fd16-3af3 ], IPv4 address = [ 10.100.68.85 ]

2789 Dec 28 15:54-15:58:31 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 1 ], EventSource = [ 8 ], VLANID = [ 1802 ], BSSIDIndex = [ 4001 ], MAC = [ 7ef9-fd16-3af3 ], IPv4 address = [ 10.100.57.18 ]

2790 Dec 28 15:54-15:58:44 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 2 ], EventSource = [ 8 ], VLANID = [ 1802 ], BSSIDIndex = [ 4001 ], MAC = [ 7ef9-fd16-3af3 ], IPv4 address = [ 10.100.57.18 ]

2791 Dec 28 15:54-15:58:44 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 7ef9-fd16-3af3, IP: 10.100.91.49, 10.100.57.18, 10.100.68.86, 10.100.144.221, Username: 20083642, AP name: TSE-508

2792 Dec 28 15:54-15:58:44 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 1 ], EventSource = [ 8 ], VLANID = [ 1802 ], BSSIDIndex = [ 4001 ], MAC = [ 7ef9-fd16-3af3 ], IPv4 address = [ 10.100.91.49 ]

2793 Dec 28 15:54-15:58:47 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 1bd:dcd-317b, IP: 10.100.62.37, -, -, -, Username: -, AP name: XXL-405, Radio ID: 1, Channel: 1

2794 Dec 28 15:54-15:58:47 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 2 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.62.37 ]

2795 Dec 28 15:54-15:58:47 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 1 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.17.43 ]

2796 Dec 28 15:54-15:58:48 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 1bd:dcd-317b, IP: 10.100.62.37, -, -, -, Username: -, AP name: XXL-405, Radio ID: 1, Channel: 1

2797 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 2 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.62.37 ]

2798 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 1bd:dcd-317b, IP: 10.100.62.37, -, -, -, Username: -, AP name: XXL-405, Radio ID: 1, Channel: 1

2799 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 1 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.62.37 ]

2800 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 2 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.17.43 ]

2801 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Received Client: 569a-21c4-4291 wlan 1801 with SSID SPT-TX on AP XL1-405 Radio ID 2. State changed to Run.

2802 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Received Client(569a-21c4-4291) online event.

2803 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Received Client(569a-21c4-4291) offline event.

2804 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]ERROR: Packet source unknown. Server IP:10.16.17.2, WIF Index:0

2805 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 1bd:dcd-317b, IP: 10.100.17.43, -, -, -, Username: -, AP name: XXL-405, Radio ID: 1, Channel: 1

2806 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 2 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.62.37 ]

2807 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 1bd:dcd-317b, IP: 10.100.17.43, -, -, -, Username: -, AP name: XXL-405, Radio ID: 1, Channel: 1

2808 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 1 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.17.43 ]

2809 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 1bd:dcd-317b, IP: 10.100.62.37, 10.100.17.43, -, -, -, Username: -, AP name: XXL-405, Radio ID: 1, Channel: 1

2810 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 2 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.17.43 ]

2811 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 1bd:dcd-317b, IP: 10.100.62.37, 10.100.17.43, -, -, -, Username: -, AP name: XXL-405, Radio ID: 1, Channel: 1

2812 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 1 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.17.43 ]

2813 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Received Client: 808e-38f7-a76a went off line from BSS 882a-5eb0-a10 with SSID SPT-TX on AP XL1-405 Radio ID 1. State changed to Unauth. Reason: Received disassoc.

2814 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Detected client IP change: Client MAC: 1bd:dcd-317b, IP: 10.100.62.37, 10.100.17.43, -, -, -, Username: -, AP name: XXL-405, Radio ID: 1, Channel: 1

2815 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 2 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.17.43 ]

2816 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Received Client: 808e-38f7-a76a went off line from BSS 882a-5eb0-a10 with SSID SPT-TX on AP XL1-405 Radio ID 1. State changed to Unauth. Reason: Received disassoc.

2817 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R PORTAL/[7]EVENT: Proc main thread IPCIM event: EventType = [ 1 ], EventSource = [ 8 ], VLANID = [ 1808 ], BSSIDIndex = [ 2630 ], MAC = [ 1bd:dcd-317b ], IPv4 address = [ 10.100.17.43 ]

2818 Dec 28 15:54-15:58:49 2023 ACL-HC-W55580R STANG[6]STANG\_CLIENT\_SNIPPING: Received Client: 808e-38f7-a76a went off line from BSS 882a-5eb0-a10 with SSID SPT-TX on AP XL1-405 Radio ID 1. State changed to Unauth. Reason: Received disassoc.

搜索结果 - (匹配4次)  
搜索 '10.1.6.72' (1个文件中匹配到4次, 总计查找1次)  
C:\Users\75393\Desktop\2024-01-05\_WK5560X\接城市局点portal\!不成功\17debug10.10.0.5.20231228\_160037.txt (匹配4次)  
行 272: \*Dec 28 15:54:17:896 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0  
行 321: \*Dec 28 15:54:17:896 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0  
行 361: \*Dec 28 15:54:19:895 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0  
行 698: \*Dec 28 15:54:33:777 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0  
行 745: \*Dec 28 15:54:35:777 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0  
行 794: \*Dec 28 15:54:37:776 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0  
行 1216: \*Dec 28 15:54:53:136 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0  
行 1288: \*Dec 28 15:54:55:135 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0  
行 1315: \*Dec 28 15:54:57:135 2023 ACL-HBC-WK5560X PORTAL/7/ERROR: Packet source unknown. Server IP:10.1.6.72, VRF Index:0

进一步地，将AC上portal server和portal web-server，radius scheme下的地址改为72：

```
#  
portal web-server portal-server  
url http://10.1.6.72/a79.htm  
#  
portal server portal-server  
ip 10.1.6.72 key cipher $c$3$iMo798Y0!9XnCW7GlzehLgthnee7uefCektWfQ==  
server-type cmcc  
#  
radius scheme portal-server  
primary authentication 10.1.6.72  
primary accounting 10.1.6.72  
user-name-format without-domain  
nas-ip 10.10.0.5  
#
```

修改之后，次差速器出现了升序，报错为：10000

上午9:23 | 248K/s  ⚡



登录test-h3c

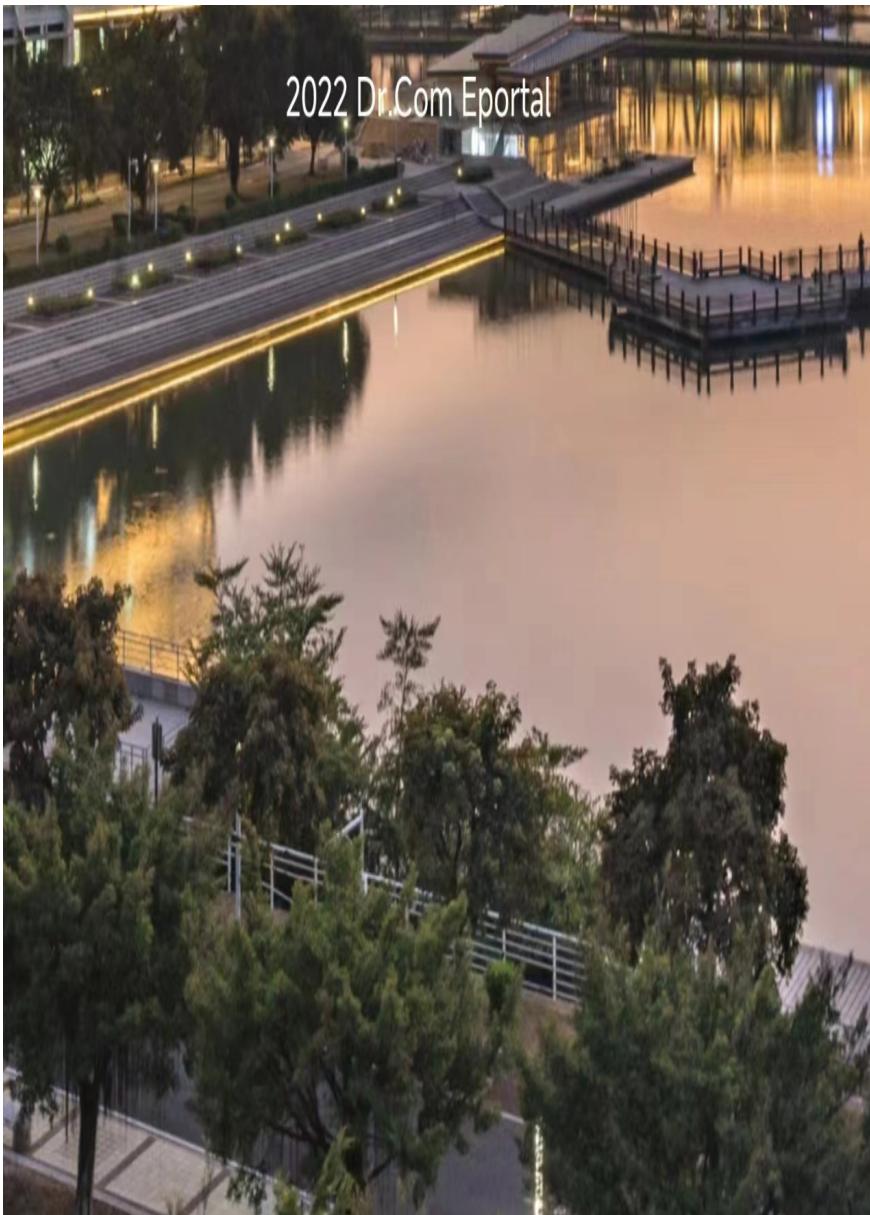
10.1.6.74

AC999

返 回

其他





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再次在AC和服务器之间抓包发现，这次AC收到服务器来自72发来的req\_auth报文后，向服务器发起了access request (radius) 认证请求，但是却未收到服务器的radius应答报文，导致认证失败。

在服务器侧查看日志发现，服务器上radius模块却按照74地址与外界交互认证报文，因此又将AC上radius下之前改为72的地址又再次修改为74，然后认证成功。

```
#  
radius scheme portal-server  
primary authentication 10.1.6.74  
primary accounting 10.1.6.74  
user-name-format without-domain  
nas-ip 10.10.0.5  
#
```

#### 解决方法

最后，现场决定将虚拟化的服务器重新使用主备模式部署，并分别使用72和73的主备地址与AC及其它接入设备进行portal认证对接，但是这涉及到AC与主备服务器对接，那么这样的情况应当怎么配置呢？

这里选取了一个AC和主备IMC认证对接的配置方法，现场照此配置后对接成功，以下列出关键配置段：

```
#  
radius scheme portal  
primary authentication 1.1.1.1  
primary accounting 1.1.1.1  
secondary authentication 1.1.1.2  
secondary accounting 1.1.1.2  
key authentication cipher $c$3$IFFvw9uzrY2iTNT2kc4MkGbVUKggZO5Bjg==
```

```
key accounting cipher $c$3$dAwxH6y9twc3OLYCQU1LhhV11DtUfCKd7g==  
user-name-format without-domain  
nas-ip X.X.X.X  
#  
radius dynamic-author server  
client ip 1.1.1.1 key cipher $c$3$FSEMTIq5J/hpeilD+glsezD63pzze cqM4Q==  
client ip 1.1.1.2 key cipher $c$3$wVL+0kiodpYq9MjLhBx+dfuheB0nmrptDA==  
#  
domain portal  
authorization-attribute idle-cut 10 10240  
authentication portal radius-scheme portal  
authorization portal radius-scheme portal  
accounting portal radius-scheme portal  
#  
portal web-server portal  
url http://1.1.1.1:80/portal  
server-detect interval 20 log trap  
server-detect url http://1.1.1.1:80/portal  
url-parameter nasip value X.X.X.X  
url-parameter wlanacname value AC  
url-parameter wlanuserip source-address  
#  
portal web-server portal_backup  
url http://1.1.1.2:80/portal  
server-detect interval 20 log trap  
server-detect url http://1.1.1.2:80/portal  
url-parameter nasip value X.X.X.X  
url-parameter wlanacname value AC  
url-parameter wlanuserip source-address  
#  
portal server portal  
ip 1.1.1.1 key cipher $c$3$s1xfsy28vDTowpGtINgmOdik0kKDjlhf hQ==  
server-detect log  
#  
portal server portal_backup  
ip 1.1.1.2 key cipher $c$3$HNCyD85qNPMzTSQEzqZopxFaXzXpOvM1JA==  
server-detect log  
#  
portal mac-trigger-server portal  
ip 1.1.1.1  
#  
portal mac-trigger-server portal_backup  
ip 1.1.1.2  
#  
wlan service-template portal  
ssid test  
client forwarding-location ap  
portal enable method direct  
portal domain portal  
portal bas-ip X.X.X.X  
portal apply web-server portal  
portal apply web-server portal_backup secondary  
service-template enable  
#
```