

知 终端完成portal认证后，每隔48 h发生portal表项消失故障

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组网及说明

AC旁挂核心，本地转发，多台AC（不同型号，不同版本）对接同一台第三方认证服务器
AC服务模板上配置的portal认证，但没有配置无感知认证。

告警信息

WU

问题描述

1. 终端完成portal认证后，每隔48 h，即使终端一直在使用，也会在终端侧提示“无法上网”，需要重新断开wifi后重连，此时会重定向自动弹出portal认证页面，需要用户重新进行portal认证；
2. 服务器侧显示是AC向服务器侧发起了终端portal下线请求；
3. 故障发生时，AC上的portal表项消失，即通过display portal user username xxx 搜索找不到有对应终端的记录。需要终端重新portal认证后，AC上才会出现portal表项。

过程分析

1. 首先查看AC上的配置，在对应的portal domain域中并没有发现存在 authorization-attribute idle-cut 相关的闲置切断配置，而且故障时终端一直在使用流量，并不存在被闲置切断的可能性。
2. 查看AC上的 display radius scheme 上也没有1812和1813端口在近期发生block的记录。
3. 对此，在AC和服务器之间进行wireshark抓包，同时，在AC上开启debug记录：

```
<AC> debug portal packet
<AC> debug portal event
<AC> debug portal error
<AC> debug radius packet user [username]
<AC> debug radius event user [username]
<AC> debug radius error user [username]
```

结果发现：

在终端通过portal认证48 h，AC给服务器发起了NTF_LOGOUT报文，向服务器侧请求终端下线，

176968	2023-06-08 12:56:55.283682	10.42.128.12	10.42.64.252	Portal	184 REQ_AUTH
176971	2023-06-08 12:56:55.317815	10.42.64.252	10.42.128.12	Portal	88 ACK_AUTH
176973	2023-06-08 12:56:55.318344	10.42.128.12	10.42.64.252	Portal	74 AFF_ACK_AUTH
248219	2023-06-08 15:04:12.247228	10.42.64.252	10.42.128.12	Portal	98 NTF_LOGOUT
251643	2023-06-08 15:08:21.250139	10.42.64.252	10.42.128.12	Portal	98 NTF_LOGOUT
258430	2023-06-08 15:18:11.761129	10.42.128.12	10.42.64.252	Portal	104 REQ_AUTH
258433	2023-06-08 15:18:11.794475	10.42.64.252	10.42.128.12	Portal	85 ACK_AUTH
258435	2023-06-08 15:18:11.794970	10.42.128.12	10.42.64.252	Portal	74 AFF_ACK_AUTH

参考案例：<https://zhiliao.h3c.com/Theme/details/16656>

但是针对debug和抓包的进一步分析发现：

在终端portal登录48 h后，AC先向服务器发送了一次计费更新报文，服务器回复了accounting response报文，但随即AC立刻向服务器发送了NTF_LOGOUT报文请求下线（携带原因是：Session-timeout），那么很有可能是这个计费的过程出现了异常，导致AC判断这个终端的Session时间到了，于是给服务器发送终端下线的请求，以下结果说明了这一问题：

每隔 12 min 计费更新

计费更新异常？
计费停止--session-timeout

后面手动刷新portal认证

```
251643 2023-06-08 15:08:21.250139 10.42.64.252 10.42.128.12 RADIUS 98 Accounting-Request 18-138
251644 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 98 Accounting-Response 18-226
251645 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 98 Accounting-Response 18-227
251646 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 98 Accounting-Response 18-227
251647 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251648 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251649 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 395 Access-Request 18-93
251650 2023-06-08 15:18:11.799805 10.42.64.252 10.42.128.12 RADIUS 480 Accounting-Request 18-233
251651 2023-06-08 15:18:11.799805 10.42.128.12 10.42.64.252 RADIUS 456 Accounting-Response 18-239
251652 2023-06-08 15:18:11.799805 10.42.64.252 10.42.128.12 RADIUS 456 Accounting-Response 18-245
251653 2023-06-08 15:18:11.799805 10.42.64.252 10.42.128.12 RADIUS 456 Accounting-Response 18-251
251654 2023-06-08 15:08:21.250139 10.42.64.252 10.42.128.12 RADIUS 62 Accounting-Response 18-226
251655 2023-06-08 15:08:21.250139 10.42.64.252 10.42.128.12 RADIUS 62 Accounting-Response 18-227
251656 2023-06-08 15:08:21.250139 10.42.64.252 10.42.128.12 RADIUS 198 38959 - 1773 Len=156
251657 2023-06-08 15:08:21.250139 10.42.64.252 10.42.128.12 RADIUS 462 Accounting-Response 18-227
251658 2023-06-08 15:08:21.250139 10.42.128.12 10.42.1.1 RADIUS 172 Ip-Access-WiFi-User-Change-Response
251659 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251660 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251661 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251662 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251663 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251664 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251665 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251666 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251667 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251668 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251669 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251670 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251671 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251672 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251673 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251674 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251675 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251676 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251677 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251678 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251679 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251680 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251681 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251682 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251683 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251684 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251685 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251686 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251687 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251688 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251689 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251690 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251691 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251692 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251693 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251694 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251695 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251696 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251697 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251698 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251699 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
251700 2023-06-08 15:08:21.250139 10.42.128.12 10.42.64.252 RADIUS 62 Accounting-Response 18-227
```

解决方法

```
Acct-Delay-Time=0
Event-Timestamp="Jun 15 2023 16:31:55 UTC"
Hlc-Proc-Cc := "HLC WX3-HX"
Hlc-Max-Startup-FileName:=68262664
*Jun 15 16:31:55:309 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: Sent request packet successfully, dst-IP: 10.42.128.12, code: 4, length: 461.
*Jun 15 16:31:55:309 2023 NB-Tech-ZJG-AC-Main RADIUS/7/PACKET:
05 d1 01 cd 16 2a c4 78 0e 00 a9 53 40 21 c2 c2
a7 22 fe ac 01 0c 67 77 30 30 32 33 33 35 39
1e 14 37 30 24 43 36 2d 44 44 2d 32 31 2d 32 34
28 41 30 3a 74 65 73 74 2d 73 69 64 20 15 4e
42 24 54 65 63 68 2d 5a 4a 47 2d 41 43 2d 4d 61
69 6e 04 06 0a 2a 40 fc 1a 18 00 00 63 a2 e6 12
57 4c 41 4e 2d 42 53 53 31 2f 30 2f 34 30 33 33
00 00 01 00 00 4a 57 12 30 31 30 30 30 30 30
30 30 30 30 30 37 34 3d 06 00 00 00 13 30 06
00 05 f5 a7 2e 06 00 02 a0 3a 1a 16 00 00 63 a2
d0 01 03 06 0f 1f 21 2b 2c 2e 2f 77 79 79 fc
2f 06 00 0e c1 99 2b 06 02 ff c7 a9 35 06 00 00
00 00 2a 06 07 74 5d 9c 34 06 00 00 00 19 0e
a9 08 98 e8 ae a4 e8 a7 92 4b 00 02 1a 19 00 00
63 a2 d2 13 6e 61 73 3a 69 69 6e 64 65 76 3d
*Jun 15 16:31:55:309 2023 NB-Tech-ZJG-AC-Main RADIUS/7/PACKET:
36 39 35 37 34 2c 27 30 30 30 30 30 37 30
30 31 31 31 36 33 31 35 34 30 30 30 30 30 35
33 30 38 30 30 30 30 31 32 31 35 1a 26 00 00
63 a2 3c 20 31 30 2e 34 32 2e 37 34 2e 32 30 33
20 30 3a 35 63 3a 63 32 3a 62 37 3a 36 63 3a
37 34 1f 13 30 30 2d 35 43 2d 43 32 2d 42 37 2d
36 43 2d 37 34 08 06 0a 2a 4a cb 1a 0b 00 00 63
a2 11 09 6e 61 63 07 06 00 00 ff 06 06 00 00
00 02 1a 0c 00 00 63 a2 b4 06 00 00 03 5d 06
00 00 00 01 1a 18 00 00 63 a2 da 12 00 0e 01 03
00 0f 1f 21 2b 2c 2e 2f 77 79 79 fc 28 06 00 00
00 03 29 00 00 00 00 00 37 64 00 3c 4b 13
00 00 63 a2 ff 0d 48 33 43 20 57 58 33 35 34 30
58 1a 0c 00 00 63 a2 3b 06 64 50 f2 e8
*Jun 15 16:31:55:309 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: Sent request packet and create request context successfully.
*Jun 15 16:31:55:309 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: Added request context to global table successfully.
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: Found request context, dstIP: 10.42.128.12, dstPort: 1813, VPI instance: --(public), socketFd: 279, pktID: 209.
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: The reply packet is valid.
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: Decoded reply packet successfully.
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main RADIUS/7/PACKET:
05 d1 00 14 01 30 89 a3 ff 2d c8 06 67 db dc ac
05 cd de 44
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: Sent reply message successfully.
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: PAM RADIUS: RADIUS accounting updated.
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main RADIUS/7/EVENT: PAM RADIUS: Fetched accounting-update reply-data successfully, resultCode=0
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main PORTAL/7/EVENT: User-SM[10.42.74.203]: Received accounting-update response, RespCode=0
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main PORTAL/7/EVENT: User-SM[10.42.74.203]: Received accounting-update response, RespCode=0
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main PORTAL/7/EVENT: User-SM[10.42.74.203]: Processed accounting-update failed and user logout.
*Jun 15 16:31:55:324 2023 NB-Tech-ZJG-AC-Main PORTAL/7/EVENT: User-SM[10.42.74.203]: Notified Auth-SM to log user out.
*Jun 15 16:31:55:325 2023 NB-Tech-ZJG-AC-Main PORTAL/7/PACKET: Portal sent 56 bytes of packet[Type=ntf_logout(8), ErrCode=0, IP=10.42.74.203].
*Jun 15 16:31:55:325 2023 NB-Tech-ZJG-AC-Main PORTAL/7/PACKET: Portal attributes information:
[ 5 TEXTINFO ] [ 18 ] [Session timeout.]
[ 10 BASTP ] [ 6 ] [10.42.64.252]
*Jun 15 16:31:55:325 2023 NB-Tech-ZJG-AC-Main PORTAL/7/PACKET: Portal original packet:
82 08 01 00 64 ab 00 00 0a 2a 4a cb 00 00 00 02
```

AC发给服务器的计费更新请求报文

根据上述wireshark和debug结果可以看出，AC在终端登录48 h后，给服务器发送了计费更新，而在收到服务器的计费应答报文后，发现RespCode = 0，于是判定终端Session-timeout，这才发送了NTF_LOGOUT报文给服务器，请求终端下线。

以上应该与服务器回复的Accounting Response报文中的Attribute没有携带相关的属性有关。

需要排查服务器侧为什么给AC发送的计费更新没有携带属性。

那么，这个48 h的Session时长是从哪里来的呢？

查看Wireshark报文可知，终端的portal认证成功后，服务器通过Access报文向终端携带了Session-Timeout 48 h的属性，如下图所示：

No.	Time	Source	Destination	Protocol	Length	Info
176582	2023-06-08 12:56:22.129504	10.42.128.12	10.42.64.252	RADIUS	62	Accounting-Response(5) (id=148, l=20)
176969	2023-06-08 12:56:55.299580	10.42.64.252	10.42.128.12	RADIUS	441	Access-Request(1) (id=68, l=399)
176970	2023-06-08 12:56:55.299895	10.42.128.12	10.42.64.252	RADIUS	106	Access-Accept(2) (id=68, l=64)
176976	2023-06-08 12:56:55.322839	10.42.64.252	10.42.128.12	RADIUS	448	Accounting-Request(4) (id=149, l=406)
176977	2023-06-08 12:56:55.322985	10.42.128.12	10.42.64.252	RADIUS	62	Accounting-Response(5) (id=149, l=20)
177086	2023-06-08 12:57:11.129739	10.42.64.252	10.42.128.12	RADIUS	494	Accounting-Request(4) (id=150, l=452)


```
<
Frame 176970: 106 bytes on wire (848 bits), 106 bytes captured (848 bits) on interface 0
Ethernet II, Src: 70:3a:74:77:a9:20 (70:3a:74:77:a9:20), Dst: 06:05:04:03:02:01 (06:05:04:03:02:01)
Internet Protocol Version 4, Src: 10.42.128.12 (10.42.128.12), Dst: 10.42.64.252 (10.42.64.252)
User Datagram Protocol, Src Port: radius (1812), Dst Port: 11136 (11136)
Radius Protocol
Code: Access-Accept (2)
Packet identifier: 0x44 (68)
Length: 64
Authenticator: 6606e3571a4b3d7bad954d43d01b027e
[This is a response to a request in frame 176969.]
[Time from request: 0.000315000 seconds]
Attribute value Pairs
AVP: l=12 t=User-Name(1): gw00261800
AVP: l=6 t=Service-Type(6): Authenticate-Only(8)
AVP: l=6 t=Acct-Interim-Interval(85): 10000
AVP: l=6 t=Session-Timeout(27): 1728000
AVP: l=14 t=Class(25): e9bb9e8aea4e6a792e889b2
```

