

多动作CoA信息包如何在BNG订户的ASR9K被处理

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Introduction

本文解释授权(CoA)的更改如何在宽带网络的Gateway(BNG) ASR9K平台被处理，并且您如何在ASR9K能排除它故障。

Prerequisites

Requirements

Cisco 建议您了解以下主题：

- 在ASR9K的BNG功能
- RADIUS属性

提示：欲知更多信息，参考[宽带网络网关配置指南](#)。

Components Used

本文档中的信息基于以下软件和硬件版本：

- 运行533版本的ASR9001。
- 自由RADIUS服务器。

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

背景信息

授权(CoA)的更改是扩展名到允许异步消息从RADIUS服务器被发送到RADIUS客户端的RADIUS标准。CoA的基本的原因是允许RADIUS服务器更改已经被核准了的订户的一个授权工作情况。对RADIUS的CoA扩展名在IETF RFC 3576被定义。

多动作CoA (MA Coa)功能扩大当前BNG CoA功能支持多个服务激活，并且服务撤销在单个CoA请求内的命令：

在多动作CoA (MA Coa)后的想法是将提供互联网服务提供商方式激活/撤销多个服务用从他们的方面是基本的方法。

MA-COA用例

这是MA Coa的一示例用例，从非常高的功能水平。

- PTA会话出来与Web数据流重定向对服务门户(HTTP重定向)。
- 通过服务门户，用户激活服务的第一个级别。这导致一个多动作CoA请求与：
 - 撤销重定向
 - 激活涡轮按钮1
 - 激活VoIP用例如2条信道
- 通过服务门户，用户激活服务第二级。这导致一个多动作CoA请求与：
 - 撤销涡轮按钮1
 - 激活涡轮按钮2
 - 撤销VoIP用2条信道
 - 激活VoIP用4条信道

在MA Coa中是，如果不能启动/撤销在CoA请求的任何服务，然后启动了/的所有服务撤销了作为必须滚动请求的该CoA一部分。本质上，必须恢复会话到其在疏忽的PRE MA Coa状态激活/撤销。然而，可能有完全回退不会是一些少见的实例。例如，请设想资源的一个案件(即内存、等等TCAM条目，IP地址)获得放弃作为多动作CoA处理一部分。如果一个随后的CoA故障发生，那些资源也许不再取得到，因此完全回退可能不是possible回退故障发生的e.If，以下动作将被采取：

- 如果coa回退故障例外在控制政策被配置，则为回退故障组指定的行动将采取。例如您能断开会话。然而，MA Coa回退故障的默认动作将是保持会话。

```
policy-map type control subscriber WDAAR_NOVA_POLICY
  event exception match-first
  class type control subscriber coa-rollback-failure do-all
    10 disconnect
  !
!
```

- 如果coa回退故障例外不是在控制政策配置，则系统日志错误在控制台将生成。分配CoA处理因为请求可以被处理在RP (基于套件的会话)或在LC (基于LC的会话)。

镜像1.显示CoA在高级的消息流。

MA Coa呼叫流

在处理MA Coa请求涉及的呼叫流的示例，在高级，解释得这里：

1. CoA客户端发送MA Coa请求用以下命令： 撤销服务服务互联网激活服务音频激活服务视频
2. Radiusd转换新定义的Cisco通用的VSAs成标准的AAA_AT属性，并且通过到策略飞机。
3. 策略飞机命令处理程序起动一个取消关联要求服务服务互联网和关联要求服务服务音频&服务视频对SubDB，然后起动一个生产执行的请求对SubDB。
4. SubDB执行必要的unassociation/关联，并且协调以其BPI客户端适用于必要的配置硬件。SubDB然后发送生成完成的(被运用的设置)消息到策略飞机。
5. 策略平面命令处理程序通过radiusd发送CoA ACK到CoA客户端。
6. 如果service-level记帐为服务服务互联网允许，策略飞机帐户协调员派出记帐Stop请求对RADIUS服务器。同样地，如果service-level记帐为服务服务音频orService视频是启用的，然后策略飞机帐户协调员派出记帐Start请求对那些服务的RADIUS服务器。

Configure

请使用在此部分描述为了配置功能在本文描述的信息。

Network Diagram

以下拓扑使用测试MA Coa。

Note:在此拓扑方面，RADIUS服务器和策略服务器/CoA客户端是同一个机箱。此设置在拓扑里使用自由Radius，并且使用radclient发送CoA信息包模拟MA Coa方案。

配置

ASR9K

```
interface Bundle-Ether1.200
  ipv4 point-to-point
  ipv4 unnumbered Loopback200
  service-policy type control subscriber WDAAR_NOVA_POLICY
  encapsulation dot1q 200
  ipsubscriber ipv4 l2-connected
  initiator dhcp
  initiator unclassified-source
```

运用以下控制政策带动IPoE会话。

```
policy-map type control subscriber WDAAR_NOVA_POLICY
  event session-start match-first
  class type control subscriber DHCP do-until-failure
    10 activate dynamic-template DT_NOVA_DHCP
    20 authorize aaa list WDAAR format WDAAR_USERNAME_NOVA password cisco
```

```

!
class type control subscriber WDAAR_STATIC do-until-failure
  10 activate dynamic-template DT_NOVA_STATIC
  20 authorize aaa list WDAAR format WDAAR_IP_STATIC password cisco
!
!
event authentication-no-response match-first
class type control subscriber class-default do-all
  10 activate dynamic-template WDAAR_NOVA_ACCT_START
  20 activate dynamic-template WDAAR_NOVA_NET50
!
!
end-policy-map
!

dynamic-template
type ipsubscriber DT_NOVA_DHCP
  ipv4 unnumbered Loopback201
!
!
interface Loopback201
  ipv4 address 199.195.148.1 255.255.255.0
!

dynamic-template
type ipsubscriber WDAAR_NOVA_ACCT_START
  accounting aaa list WDAAR type session periodic-interval 5
!
!

dynamic-template
type service WDAAR_NOVA_NET50
  service-policy input WDAAR_10Mbps
  service-policy output WDAAR_Upload
!
!

```

Note:为了模拟IPoE订户鸢尾属客户端用于模拟DHCP客户端。

为了模拟MA Coa工作情况配置两QoS策略限制数据流在入站和出局方向。

- WDAAR_DAY_PACKAGE
- WDAAR_NIGHT_PACKAGE

```

dynamic-template
type service WDAAR_DAY_PACKAGE
  service-policy input WDAAR_Internet_Service_10Mbps_IN
  service-policy output WDAAR_Internet_Service_10Mbps_OUT
  accounting aaa list WDAAR type service periodic-interval 10
!
!

dynamic-template
type service WDAAR_NIGHT_PACKAGE
  service-policy input WDAAR_Internet_Service_5Mbps_IN
  service-policy output WDAAR_Internet_Service_5Mbps_OUT
  accounting aaa list WDAAR type service periodic-interval 10
!
!

```

配置策略修正数据流到10Mbps在日程序包的入站和输出方向，并且对于晚上程序包它是限制对5Mbps。

```

dynamic-template
  type service WDAAR_DAY_PACKAGE
    service-policy input WDAAR_Internet_Service_10Mbps_IN
    service-policy output WDAAR_Internet_Service_10Mbps_OUT
    accounting aaa list WDAAR type service periodic-interval 10
  !
!
dynamic-template
  type service WDAAR_NIGHT_PACKAGE
    service-policy input WDAAR_Internet_Service_5Mbps_IN
    service-policy output WDAAR_Internet_Service_5Mbps_OUT
    accounting aaa list WDAAR type service periodic-interval 10
  !
!

```

验证

此部分提供您能使用为了验证的信息MA Coa适当地工作。

IPoE在ASR9K的订户会话。

```

RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber session all detail
Mon Jul 27 11:24:46.467 UTC
Interface:                Bundle-Ether1.200.ip18010
Circuit ID:               Unknown
Remote ID:                Unknown
Type:                     IP: DHCP-trigger
IPv4 State:               Up, Mon Jul 27 11:23:10 2015
IPv4 Address:             172.188.243.147, VRF: default
Mac Address:              0000.6602.0102
Account-Session Id:      00004729
Nas-Port:                 Unknown
User name:                0000.6602.0102
Formatted User name:     0000.6602.0102
Client User name:        unknown
Outer VLAN ID:           200
Subscriber Label:        0x00000048
Created:                  Mon Jul 27 11:23:08 2015
State:                    Activated
Authentication:           unauthenticated
Authorization:            authorized
Access-interface:        Bundle-Ether1.200
Policy Executed:
policy-map type control subscriber WDAAR_NOVA_POLICY
  event Session-Start match-first [at Mon Jul 27 11:23:08 2015]
  class type control subscriber DHCP do-until-failure [Succeeded]
    10 activate dynamic-template DT_NOVA_DHCP [Succeeded]
    20 authorize aaa list WDAAR [Succeeded]
Session Accounting:
  Acct-Session-Id:        00004729
  Method-list:           WDAAR
  Accounting started:    Mon Jul 27 11:23:10 2015
  Interim accounting:    On, interval 2 mins
  Last successful update: Never
  Next update in:       00:00:24 (dhms)
Service Accounting:     WDAAR_DAY_PACKAGE
  Acct-Session-Id:      0000472a
  Method-list:          WDAAR

```

```
Accounting started:      Mon Jul 27 11:23:10 2015
Interim accounting:     On, interval 10 mins
  Last successful update: Never
  Next update in:       00:08:24 (dhms)
Last COA request received: unavailable
```

现在，如果用内部隐藏的关键字检查会话的详细资料，您能看到什么AVP的您从半径接受了。如果enable (event)在ASR9K的调试，虽然提出会话您能看到那。从会话输出，您能看到那，当订户来联机时，您也应用了WDAAR_DAY_PACKAGE和您enable (event)会话记帐并且服务记帐。

```
RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber session all detail internal
Mon Jul 27 11:27:10.554 UTC
```

```
Interface:              Bundle-Ether1.200.ip18010
Circuit ID:              Unknown
Remote ID:               Unknown
Type:                   IP: DHCP-trigger
IPv4 State:              Up, Mon Jul 27 11:23:10 2015
IPv4 Address:            172.188.243.147, VRF: default
IPv4 Up helpers:         0x00000040 {IPSUB}
IPv4 Up requestors:      0x00000040 {IPSUB}
Mac Address:             0000.6602.0102
Account-Session Id:     00004729 Nas-Port:                Unknown
User name:               0000.6602.0102
Formatted User name:     0000.6602.0102
Client User name:        unknown
Outer VLAN ID:          200
Subscriber Label:       0x00000048
Created:                 Mon Jul 27 11:23:08 2015
State:                   Activated
Authentication:          unauthenticated
Authorization:           authorized
Ifhandle: 0x000abc20 Session History ID:                1
Access-interface:        Bundle-Ether1.200
SRG Flags:               0x00000000
Policy Executed:
```

```
event Session-Start match-first [at Mon Jul 27 11:23:08 2015]
class type control subscriber DHCP do-until-failure [Succeeded]
  10 activate dynamic-template DT_NOVA_DHCP [cerr: No error][aaa: Success]
  20 authorize aaa list WDAAR [cerr: No error][aaa: Success]
```

```
Session Accounting:
Acct-Session-Id:        00004729
Method-list:            WDAAR
Accounting started:     Mon Jul 27 11:23:10 2015
Interim accounting:     On, interval 2 mins
  Last successful update: Mon Jul 27 11:25:10 2015
  Next update in:       00:02:00 (dhms)
  Last update sent:     Mon Jul 27 11:25:10 2015
  Updates sent:         1
  Updates accepted:     1
  Updates rejected:     0
  Update send failures: 0
Service Accounting:     WDAAR_DAY_PACKAGE
Acct-Session-Id:        0000472a
Method-list:            WDAAR
Accounting started:     Mon Jul 27 11:23:10 2015
Interim accounting:     On, interval 10 mins
  Last successful update: Never
  Next update in:       00:06:00 (dhms)
  Last update sent:     Never
  Updates sent:         0
```

```

    Updates accepted:      0
    Updates rejected:     0
    Update send failures:  0
    Accounting stop state: Final stats available
Last COA request received: unavailable
User Profile received from AAA:
Attribute List: 0x50105e7c
1: acct-interval len= 4 value= 120(78) 2: accounting-list len= 5 value= WDAAR Pending Callbacks:
InterimAcct>StatsD,
Services:
  Name       : DT_NOVA_DHCP
  Service-ID : 0x4000016
  Type       : Template
  Status     : Applied
-----
  Name       : WDAAR_DAY_PACKAGE
  Service-ID : 0x400001a
  Type       : Multi Template
  Status     : Applied
-----
[Event History]
  Jul 27 11:23:08.672 IPv4 Start
  Jul 27 11:23:10.080 SUBDB produce done
  Jul 27 11:23:10.080 IPv4 Up

```

如果要为订户会话，发现CoA和RADIUS信息包您能enable (event)这些调试。

- debug radius
- debug radius动态作者

Note:您能enable (event)过滤仅sepecific MAC地址RADIUS数据流的debug radius过滤器MAC地址。

```

RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Send Access-Request to
10.48.88.121:56777 id 229, len 218
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: authenticator D0 EF B5 50 DD 9A 1A
84 - FB 36 5C FB 5C DB 96 FE
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 41
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Cisco AVpair [1] 35 client-mac-
address=0000.6602.0102
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Acct-Session-Id [44] 10 00004729
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: NAS-Port-Id [87] 11 0/0/1/200
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 17
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: cisco-nas-port [2] 11 0/0/1/200
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: User-Name [1] 16 0000.6602.0102
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Service-Type [6] 6 Outbound[0]
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: User-Password [2] 18 *
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: NAS-Port-Type [61] 6
VIRTUAL_IPOEOVLAN[0]
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Event-Timestamp [55] 6 1437996188
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 23
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Cisco AVpair [1] 17 dhcp-client-id=
RP/0/RSP0/CPU0:Jul 27 11:23:08.706 : radiusd[1133]: RADIUS: Nas-Identifier [32] 16 acdc-asr9000-
4
RP/0/RSP0/CPU0:Jul 27 11:23:08.707 : radiusd[1133]: RADIUS: NAS-IP-Address [4] 6 10.48.88.54
RP/0/RSP0/CPU0:Jul 27 11:23:08.707 : radiusd[1133]: RADIUS: NAS-IPv6-Address [95] 22 1a 10 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
RP/0/RSP0/CPU0:Jul 27 11:23:08.707 : radiusd[1133]: RADIUS: 00 00 00 00
RP/0/RSP0/CPU0:Jul 27 11:23:08.707 : radiusd[1133]: Got global deadtime 0
RP/0/RSP0/CPU0:Jul 27 11:23:08.707 : radiusd[1133]: Using global deadtime = 0 sec
RP/0/RSP0/CPU0:Jul 27 11:23:08.707 : radiusd[1133]: Start timer thread rad_ident 229 remote_port
56777 remote_addr 10.48.88.121, socket 1342510940 rctx 0x50258020

```

```

RP/0/RSP0/CPU0:Jul 27 11:23:08.707 : radiusd[1133]: Successfully sent packet and started timeout
handler for rctx 0x50258020
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: Radius packet decryption complete with rc =
0
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: RADIUS: Received from id 229
10.48.88.121:56777, Access-Accept, len 105
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: RADIUS: authenticator 9D 27 8C A5 28 C8 AE
2B - 58 56 08 DF C2 BA 06 28
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: RADIUS: Acct-Interim-Interval[85] 6 120
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 40
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: RADIUS: Cisco AVpair [1] 34
subscriber:accounting-list=WDAAR
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 39
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: RADIUS: Cisco AVpair [1] 33
subscriber:sa=WDAAR_DAY_PACKAGE
RP/0/RSP0/CPU0:Jul 27 11:23:08.710 : radiusd[1133]: Freeing server group transaction_id
(3D000000)

```

订户身份和凭证AAA属性从不同的组件在SADB (订户属性数据库)存储。SADB不保存订户配置。您能使用以下show命令为该会话发现所有属性。

- 显示订户管理器sadb

```

RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber manager sadb
Mon Jul 27 12:13:36.273 UTC
Sublabel: 0x00000048 Node_ID: 00000001 Signature: 0xabcd12 Version: 1 Rev: 21
Length: 297
Attribute list: 1343184692
1: protocol-type len= 4 dhcp
2: dhcp-client-id len= 15
3: port-type len= 4 Virtual IP over VLAN
4: outer-vlan-id len= 4 200(c8)
5: client-mac-address len= 14 0000.6602.0102
6: parent-if-handle len= 4 1568(620)
7: string-session-id len= 8 00004729
8: interface len= 9 0/0/1/200
9: formatted-username len= 14 0000.6602.0102
10: username len= 14 0000.6602.0102
11: author_status len= 1 true
12: addr len= 4 172.188.243.147
13: if-handle len= 4 703520(abc20)
14: vrf-id len= 4 1610612736(60000000)
15: ipv4-session-state len= 1 true
16: accounting-list len= 5 WDAAR
17: start_time len= 4 Mon Jul 27 11:23:10 2015

```

有称为Subscriber的另一个数据库存储设置和设置的关联的Database(SubDB)对会话。SubDB (用户数据库)设计管理BNG的订户的动态配置。订户配置是一套预定义的功能和他们的特定值。

```

RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber database association
Mon Jul 27 12:26:38.186 UTC

```

Location 0/RSP0/CPU0

```

Bundle-Ether1.200.ip18010, subscriber label 0x48
Name                               Template Type
-----                               -
U00000048                           User profile
WDAAR_DAY_PACKAGE Service DT_NOVA_DHCP           IP subscriber

```


您能也使用过滤器订户**标签**为一个订户发现信息。

- 显示用户数据库关联订户**标签**<SUBSCRIBER-LABEL >

MA Coa测试

因为您首先已经运用了服务WDAAR_DAY_PACKAGEON会话，至于测试您从会话取消WDAAR_DAY_PACKAGE服务。现在您能看到没有在会话的服务WDAAR_DAY_PACKAGE活跃。

```
RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber session all detail internal
Mon Jul 27 13:47:55.881 UTC
```

```
Interface:          Bundle-Ether1.200.ip18012
Circuit ID:         Unknown
Remote ID:          Unknown
Type:               IP: DHCP-trigger
IPv4 State:         Up, Mon Jul 27 13:33:22 2015
IPv4 Address:       172.188.243.147, VRF: default
IPv4 Up helpers:    0x00000040 {IPSUB}
IPv4 Up requestors: 0x00000040 {IPSUB}
Mac Address:        0000.6602.0102
Account-Session Id: 0000472d
Nas-Port:           Unknown
User name:          0000.6602.0102
Formatted User name: 0000.6602.0102
Client User name:   unknown
Outer VLAN ID:      200
Subscriber Label:   0x0000004a
Created:            Mon Jul 27 13:33:21 2015
State:              Activated
Authentication:     unauthenticated
Authorization:       authorized
Ifhandle:           0x000abca0
Session History ID: 1
Access-interface:   Bundle-Ether1.200
SRG Flags:          0x00000000
Policy Executed:
```

```
event Session-Start match-first [at Mon Jul 27 13:33:21 2015]
class type control subscriber DHCP do-until-failure [Succeeded]
  10 activate dynamic-template DT_NOVA_DHCP [cerr: No error][aaa: Success]
  20 authorize aaa list WDAAR [cerr: No error][aaa: Success]
```

Session Accounting:

```
Acct-Session-Id:    0000472d
Method-list:        WDAAR
Accounting started: Mon Jul 27 13:33:22 2015
Interim accounting: On, interval 2 mins
  Last successful update: Mon Jul 27 13:47:24 2015
  Next update in:      00:01:27 (dhms)
  Last update sent:    Mon Jul 27 13:47:24 2015
  Updates sent:        7
  Updates accepted:    7
  Updates rejected:    0
  Update send failures: 0
Accounting stop state: Final stats available
```

Last COA request: Mon Jul 27 13:47:50 2015

COA Request Attribute List: 0x50105f70

```
1: sd len= 17 value= WDAAR_DAY_PACKAGE 2: command len= 18 value= deactivate-service 3: service-
info len= 17 value= WDAAR_DAY_PACKAGE 4: service-name len= 17 value= WDAAR_DAY_PACKAGE Last COA
response: Result ACK
```

```
COA Response Attribute List: 0x50106180
1: sd len= 17 value= WDAAR_DAY_PACKAGE
User Profile received from AAA:
Attribute List: 0x50106390
1: acct-interval len= 4 value= 120(78)
2: accounting-list len= 5 value= WDAAR
Services:
Name : DT_NOVA_DHCP
Service-ID : 0x4000016
Type : Template
Status : Applied
```

```
-----
[Event History]
Jul 27 13:33:21.152 IPv4 Start
Jul 27 13:33:22.560 IPv4 Up
Jul 27 13:47:50.528 CoA request
Jul 27 13:47:50.784 SUBDB produce done [many]
```

按照说明，当服务无连系时，然后在ASR9K的radiusd进程发送记帐终止到RADIUS服务器。并且在调试此工作情况也被确认。

```
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Send Accounting-Request to
10.48.88.121:56778 id 48, len 391
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: authenticator 6C E1 D2 2B 49 1A EE
E4 - 6D 36 FD FA 7A 84 26 50
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Acct-Interim-Interval[85] 6
10
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Acct-Session-Time [46] 6
868
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Acct-Terminate-Cause[49] 6
admin-reset[0]
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Acct-Status-Type [40] 6
Stop[0]
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Event-Timestamp [55] 6
1438004870
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 23
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Cisco AVpair [1] 17
dhcp-client-id=
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: NAS-Port-Type [61] 6
VIRTUAL_IPOEOVLAN[0]
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 41
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Cisco AVpair [1] 35
client-mac-address=0000.6602.0102
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: NAS-Port-Id [87] 11
0/0/1/200
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 17
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: cisco-nas-port [2] 11
0/0/1/200
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: User-Name [1] 16
0000.6602.0102
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Framed-IP-Address [8] 6
172.188.243.147
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 22
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Cisco AVpair [1] 16
vrf-id=default
RP/0/RSP0/CPU0:Jul 27 13:47:50.687 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 29
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Cisco AVpair [1] 23
accounting-list=WDAAR
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: AAA Unsupported Attr: user-
maxlinks [196] 6
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 32
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Cisco AVpair [1] 26
connect-progress=Call Up
```

```

RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Vendor,Cisco      [26] 34
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Cisco AVpair      [1] 28
parent-session-id=0000472d
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Vendor,Cisco      [26] 38
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Cisco AVpair      [1] 32
service-name=WDAAR_DAY_PACKAGE
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Acct-Session-Id    [44] 10
0000472e
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Nas-Identifier    [32] 16
acdc-asr9000-4
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: NAS-IP-Address    [4] 6
10.48.88.54
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: NAS-IPv6-Address  [95] 22
1a 10 00 00 00 00 00 00 00 00 00 00 00 00 00
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS:
00 00 00 00
RP/0/RSP0/CPU0:Jul 27 13:47:50.688 : radiusd[1133]: RADIUS: Acct-Delay-Time  [41] 6
0

```

此show命令也陈列成功的CoA的统计数据。

```

RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber manager statistics AAA COA
Mon Jul 27 13:53:49.627 UTC

```

[CHANGE OF AUTHORIZATION STATISTICS]

Location: 0/RSP0/CPU0

CoA Requests:

Type	Received	Acked	NAKed
====	=====	=====	=====
Account Logon	0	0	0
Account Logoff	0	0	0
Account Update	0	0	0
Account-Query	0	0	0
Disconnect	0	0	0
Single Service Logon	0	0	0
Single Service Logoff	1 1 0	Single Service Modify	0 0 0
Multiple Service	0	0	0

Errors:

Responses to COA with unknown session identifier = 3

[CHANGE OF AUTHORIZATION STATISTICS]

Location: 0/0/CPU0

CoA Requests:

Type	Received	Acked	NAKed
====	=====	=====	=====
Account Logon	0	0	0
Account Logoff	0	0	0
Account Update	0	0	0
Account-Query	0	0	0
Disconnect	0	0	0
Single Service Logon	0	0	0
Single Service Logoff	0	0	0
Single Service Modify	0	0	0
Multiple Service	0	0	0

Errors:

None

现在，您运用了在订户会话的服务WDAAR_NIGHT_PACKAGE并且再看到统计数据。

RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber manager statistics AAA COA
Mon Jul 27 13:53:49.627 UTC

[CHANGE OF AUTHORIZATION STATISTICS]

Location: 0/RSP0/CPU0

CoA Requests:

Type	Received	Acked	NAKed
====	====	====	====
Account Logon	0	0	0
Account Logoff	0	0	0
Account Update	0	0	0
Account-Query	0	0	0
Disconnect	0	0	0
Single Service Logon	0	0	0
Single Service Logoff	1 1 0	Single Service Modify	0 0 0
Multiple Service	0	0	0

Errors:

Responses to COA with unknown session identifier = 3

[CHANGE OF AUTHORIZATION STATISTICS]

Location: 0/0/CPU0

CoA Requests:

Type	Received	Acked	NAKed
====	====	====	====
Account Logon	0	0	0
Account Logoff	0	0	0
Account Update	0	0	0
Account-Query	0	0	0
Disconnect	0	0	0
Single Service Logon	0	0	0
Single Service Logoff	0	0	0
Single Service Modify	0	0	0
Multiple Service	0	0	0

Errors:

None

应用service , 因此您能看到Service登录计数器上面订户被增加和输出了您能也看到应用了。

RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber manager statistics AAA COA
Mon Jul 27 13:58:00.410 UTC

[CHANGE OF AUTHORIZATION STATISTICS]

Location: 0/RSP0/CPU0

CoA Requests:

Type	Received	Acked	NAKed
====	====	====	====
Account Logon	0	0	0
Account Logoff	0	0	0
Account Update	0	0	0
Account-Query	0	0	0
Disconnect	0	0	0
Single Service Logon	1 1 0		
Single Service Logoff	1	1	0
Single Service Modify	0	0	0

Multiple Service 0 0 0

Errors:

Responses to COA with unknown session identifier = 3

[CHANGE OF AUTHORIZATION STATISTICS]

Location: 0/0/CPU0

CoA Requests:

Type	Received	Acked	NAKed
====	=====	=====	=====
Account Logon	0	0	0
Account Logoff	0	0	0
Account Update	0	0	0
Account-Query	0	0	0
Disconnect	0	0	0
Single Service Logon	0	0	0
Single Service Logoff	0	0	0
Single Service Modify	0	0	0
Multiple Service	0	0	0

Errors:

None

您每次只当前应用一service与单个CoA信息包并且取消一项服务与单个CoA信息包，您当前将发送取消服务的一个CoA信息包并且运用在单个CoA信息包的服务。

RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber session all detail internal

Mon Jul 27 14:03:40.255 UTC

```

Interface: Bundle-Ether1.200.ip18012
Circuit ID: Unknown
Remote ID: Unknown
Type: IP: DHCP-trigger
IPv4 State: Up, Mon Jul 27 13:33:22 2015
IPv4 Address: 172.188.243.147, VRF: default
IPv4 Up helpers: 0x00000040 {IPSUB}
IPv4 Up requestors: 0x00000040 {IPSUB}
Mac Address: 0000.6602.0102
Account-Session Id: 0000472d
Nas-Port: Unknown
User name: 0000.6602.0102
Formatted User name: 0000.6602.0102
Client User name: unknown
Outer VLAN ID: 200
Subscriber Label: 0x0000004a
Created: Mon Jul 27 13:33:21 2015
State: Activated
Authentication: unauthenticated
Authorization: authorized
Ifhandle: 0x000abca0
Session History ID: 1
Access-interface: Bundle-Ether1.200
SRG Flags: 0x00000000
Policy Executed:

```

```

event Session-Start match-first [at Mon Jul 27 13:33:21 2015]
class type control subscriber DHCP do-until-failure [Succeeded]
10 activate dynamic-template DT_NOVA_DHCP [cerr: No error][aaa: Success]
20 authorize aaa list WDAAR [cerr: No error][aaa: Success]

```

Session Accounting:

```

Acct-Session-Id: 0000472d
Method-list: WDAAR

```

```

Accounting started:      Mon Jul 27 13:33:22 2015
Interim accounting:     On, interval 2 mins
  Last successful update: Mon Jul 27 14:03:24 2015
  Next update in:       00:01:43 (dhms)
  Last update sent:     Mon Jul 27 14:03:24 2015
  Updates sent:         15
  Updates accepted:     15
  Updates rejected:     0
  Update send failures: 0
Accounting stop state:  Final stats available
Service Accounting:    WDAAR_DAY_PACKAGE
Acct-Session-Id:      00004730
Method-list:          WDAAR
Accounting started:    Mon Jul 27 14:03:35 2015
Interim accounting:    On, interval 10 mins
  Last successful update: Never
  Next update in:      00:09:56 (dhms)
  Last update sent:    Never
  Updates sent:        0
  Updates accepted:    0
  Updates rejected:    0
  Update send failures: 0
Accounting stop state:  Final stats available
Last COA request: Mon Jul 27 14:03:35 2015
COA Request Attribute List: 0x50106248
1: sd len= 19 value= WDAAR_NIGHT_PACKAGE 2: command len= 18 value= deactivate-service 3:
service-info len= 19 value= WDAAR_NIGHT_PACKAGE 4: service-name len= 19 value=
WDAAR_NIGHT_PACKAGE 5: sa len= 17 value= WDAAR_DAY_PACKAGE 6: command len= 16 value= activate-
service 7: service-info len= 17 value= WDAAR_DAY_PACKAGE 8: service-name len= 17 value=
WDAAR_DAY_PACKAGE Last COA response: Result ACK
COA Response Attribute List: 0x50106458
1: sd len= 19 value= WDAAR_NIGHT_PACKAGE
2: sa len= 17 value= WDAAR_DAY_PACKAGE
User Profile received from AAA:
Attribute List: 0x50106668
1: acct-interval len= 4 value= 120(78)
2: accounting-list len= 5 value= WDAAR
Services:
Name      : DT_NOVA_DHCP
Service-ID : 0x4000016
Type      : Template
Status    : Applied
-----
Name      : WDAAR_DAY_PACKAGE
Service-ID : 0x400001a
Type      : Multi Template
Status    : Applied
-----
[Event History]
Jul 27 13:33:21.152 IPv4 Start
Jul 27 13:33:22.560 IPv4 Up
Jul 27 14:03:35.296 CoA request [many]
Jul 27 14:03:35.680 SUBDB produce done [many]

```

使用MA Coa您能看到也增加多业务计数器。

```

RP/0/RSP0/CPU0:acdc-asr9000-4#show subscriber manager statistics AAA COA
Mon Jul 27 14:05:04.724 UTC

```

```
[ CHANGE OF AUTHORIZATION STATISTICS ]
```

```
Location: 0/RSP0/CPU0
```

CoA Requests:

Type	Received	Acked	NAKed
====	===== =====	===== =====	===== =====
Account Logon	0	0	0
Account Logoff	0	0	0
Account Update	0	0	0
Account-Query	0	0	0
Disconnect	0	0	0
Single Service Logon	1	1	0
Single Service Logoff	1	1	0
Single Service Modify	0	0	0
Multiple Service	1 1 0		

Errors:

Responses to COA with unknown session identifier = 3

[CHANGE OF AUTHORIZATION STATISTICS]

Location: 0/0/CPU0

CoA Requests:

Type	Received	Acked	NAKed
====	===== =====	===== =====	===== =====
Account Logon	0	0	0
Account Logoff	0	0	0
Account Update	0	0	0
Account-Query	0	0	0
Disconnect	0	0	0
Single Service Logon	0	0	0
Single Service Logoff	0	0	0
Single Service Modify	0	0	0
Multiple Service	0	0	0

Errors:

None

如果ASR9K收到一个CoA信息包进行对订户会话，但是ASR9K在CoA信息包接受的标识的任何动作不属于任何活动订户会话下列信息在日志然后displaed，如果您enable (event)调试被建议以上。

```
RP/0/RSP0/CPU0:Jul 27 13:41:39.133 : radiusd[1133]: RADIUS: Received from id 159 , CoA Request, len 69
RP/0/RSP0/CPU0:Jul 27 13:41:39.133 : radiusd[1133]: RADIUS: authenticator 0D 52 11 54 B0 B7 37 07 - E1 9A 1D AF FA 1A 1A 09
RP/0/RSP0/CPU0:Jul 27 13:41:39.133 : radiusd[1133]: RADIUS: Acct-Session-Id [44] 10 00004723
RP/0/RSP0/CPU0:Jul 27 13:41:39.133 : radiusd[1133]: RADIUS: Vendor,Cisco [26] 39
RP/0/RSP0/CPU0:Jul 27 13:41:39.133 : radiusd[1133]: RADIUS: Cisco AVpair [1] 33
subscriber:sd=WDAAR_DAY_PACKAGE
RP/0/RSP0/CPU0:Jul 27 13:41:39.133 : radiusd[1133]: Processing Dynamic authorization request
RP/0/RSP0/CPU0:Jul 27 13:41:39.133 : radiusd[1133]: COA: Service-Name attribute is present in service profile push
RP/0/RSP0/CPU0:Jul 27 13:41:39.134 : radiusd[1133]: COA/POD:request processing underway.
RP/0/RSP0/CPU0:Jul 27 13:41:39.135 : iedged[245]: [IEDGE:TP83:COMMAND-HANDLER:ERROR:0x0] 0
matching session found for CoA request, rc 0
LC/0/0/CPU0:Jul 27 13:41:39.137 : iedged[209]: [IEDGE:TP83:COMMAND-HANDLER:ERROR:0x0] 0 matching session found for CoA request, rc 0
```

Troubleshoot

您能使用这些on命令ASR9K验证CoA信息包处理。如果CoA信息包顺利地处理了或它是Nacked由ASR9K。

- show radius动态作者

上述输出展览简要概述多少CoA是ACK'd和NACK'd由ASR9K。

- 显示订户管理器统计数据AAA COA

输出包括一个服务总数的一个统计数据激活(服务登录), 并且一个服务撤销(服务注销)被接受了, ACK'd和NACK'd并且包括跟踪的**多重服务的**计数器。

- 显示订户管理器统计数据PRE事件

输出陈列乘策略飞机策略规定引擎的多个服务事件的统计数据(PRE)处理了。

- 显示订户管理器统计数据SVM事件

如果配置了coa回退的例外, 则成功的重算跟随失败的MA Coa请求的和跟随失败的MA Coa请求的失败的重算的上述show statistics命令。

- 显示订户管理器非零统计数据穿孔机

上述命令给予您关于CoA的处理时间的简要概述在ASR9K的并且包括事务处理时间(平均值、标准偏差、最小数量、最大数量和计数) CoA处理的。