为拨入客户端配置基本 AAA RADIUS

目录

简介

使用验证、授权和统计(AAA)远程验证拨入用户服务(RADIUS)服务器，本文描述配置示例使用接入服务器接受流入模拟和ISDN连接，并且验证他们。关于AAA和RADIUS的更多信息，参考以下文档：

- 配置RADIUS
- 在接入服务器上配置基本 AAA

先决条件

要求

此配置假设RADIUS服务器正确地设置。此配置用多数商业可用的RADIUS服务器也工作。欲知关于适当的服务器配置的详情，参考您的RADIUS服务器文档。

使用的组件

本文档中的信息基于以下软件和硬件版本。

- Cisco AS5300用T1PRI和48个数字调制解调器。它运行Cisco IOS软件版本12.0(7)T。
- Unix (CSU)服务器的CiscoSecure，版本2.3(3)。

描述的AAA特定配置此处可以也与所有简单拨号方案一起使用。保证接入服务器能接受呼入呼叫

，然后添加适当的AAA命令，如下面配置所显示。

本文档中的信息都是基于特定实验室环境中的设备创建的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您是在真实网络上操作，请确保您在使用任何命令前已经了解其潜在影响。

规则

有关文档规则的详细信息，请参阅 Cisco 技术提示规则。

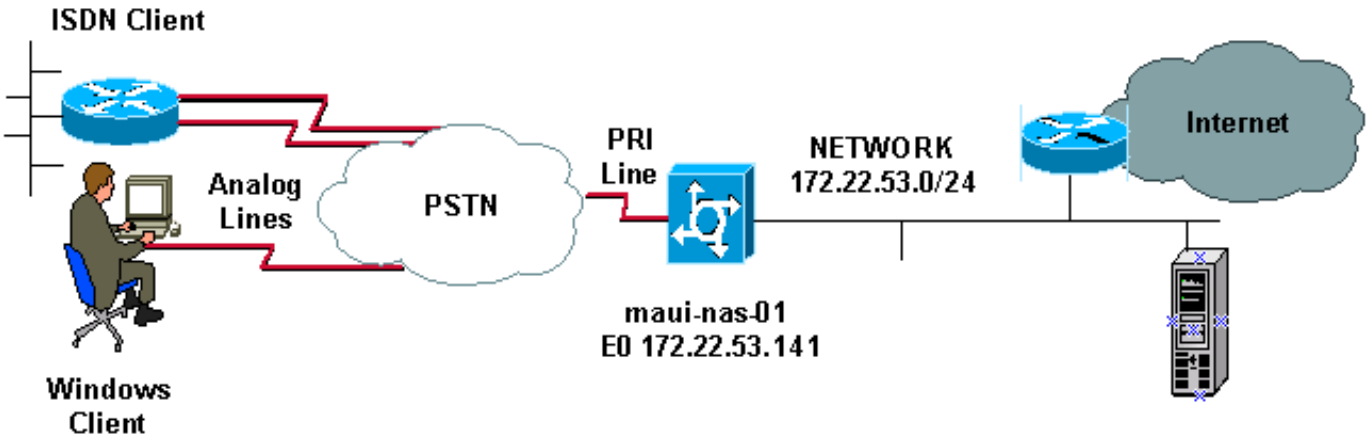
配置

本部分提供有关如何配置本文档所述功能的信息。

注意： 要查找本文档所用命令的其他信息，请使用命令查找工具（仅限注册用户）。

网络图

本文档使用下图所示的网络设置。



配置

和网络接入服务器(NAS)配置下面提供CSU和CiscoSecure NT (CSNT)配置。因为此配置表示一个简单拨入情况， ISDN的CiscoSecure配置和异步用户是相同的。因为不是与此RADIUS配置相关，ISDN客户端配置没有包括。

CSU
#**./ViewProfile -p 9900 -u async_client** User Profile Information user = async_client{ profile_id = 110 profile_cycle = 2 radius=Cisco { check_items= { 2=cisco *!--- Password(2) is "cisco"* } reply_attributes= { 6=2 *!--- Service-Type(6) is Framed (2)* 7=1 *!--- Frame d-Protocol(7) is PPP (1)* } } } # **./ViewProfile -p 9900 -u isdn_user** User Profile Information user = isdn_user{ profile_id = 24 profile_cycle = 4 radius=Cisco { check_items= { 2=cisco *! --- Password(2) is "cisco"* } reply_attributes= { 6=2 *! --- Service-Type(6) is Framed (2)* 7=1 *! --- Framed-Protocol(7) is PPP (1)* } } }

注意： 对于此简单情况，异步的配置和ISDN用户是相同的。

CSNT RADIUS

配置CiscoSecure NT (CSNT) RADIUS ：

1. 创建新用户名为isdn_user和async_client。
2. 配置在User Setup部分的适当的密码
3. 在互联网工程任务组(IETF) RADIUS属性的部分，请选择从下拉菜单的以下项目：**服务类型(属性6) =Framed和帧协议(属性7)=PPP注意：** 您必须点击在属性查找的复选框服务类型和帧协议旁边。**注意：** 对于此简单情况，异步的配置和ISDN用户是相同的。

maui-nas-01

```
maui-nas-01#show running-config Building
configuration... Current configuration: ! version 12.0
service timestamps debug datetime msec service
timestamps log datetime msec service password-encryption
! hostname maui-nas-01 ! aaa new-model !--- Initiates
the AAA access control system. !--- This command
immediately locks down login and PPP authentication. aaa
authentication login default group radius local !---
Exec login (for the list default) is authenticated using
methods !--- radius then local. The router uses RADIUS
for authentication at the !--- login(exec) prompt. If
RADIUS returns an error, the user is authenticated !---
using the local database. aaa authentication login
NO_AUTHEN none !--- Exec login (for the list NO_AUTHEN)
has authentication method none !--- (no authentication).
Interfaces to which this list is applied will not have
!--- authentication enabled. Refer to the console port
(line con 0) configuration. aaa authentication ppp
default if-needed group radius local !--- PPP
authentication (for the list default) uses methods
radius then local. !--- The if-needed keyword
automatically permits ppp for users that have !---
successfully authenticated using exec mode. If the EXEC
facility has !--- authenticated the user, RADIUS
authentication for PPP is not performed. !----This is
necessary for clients that use terminal window after
dial. aaa authorization network default group radius
local !--- Authorization of network services (PPP
services) for the list default !--- uses methods radius
then local. This is neccessary if you use RADIUS !---
for the client IP address, Access List assignment and so
on. enable secret 5 <deleted> ! username admin password
7 <deleted> !--- This username allows for access to the
router in situations where !--- connectivity to the
RADIUS server is lost. This is because the AAA !---
configuration for exec login has the alternate method
local. spe 2/0 2/7 firmware location
system:/ucode/mica_port_firmware ! resource-pool disable
! ip subnet-zero no ip finger ! isdn switch-type
primary-ni !--- Switch type is Primary NI-2. isdn voice-
call-failure 0 mta receive maximum-recipients 0 ! !
controller T1 0 !--- T1 0 controller configuration.
framing esf clock source line primary linecode b8zs pri-
group timeslots 1-24 ! controller T1 1 !--- T1 1 is
unused. clock source line secondary 1 ! controller T1 2
!--- T1 1 is unused. ! controller T1 3 !--- T1 1 is
unused. ! interface Ethernet0 ip address 172.22.53.141
255.255.255.0 no ip directed-broadcast ! interface
Serial0:23 !--- D-channel configuration for T1 0. no ip
address no ip directed-broadcast encapsulation ppp
```

```
dialer pool-member 23 !--- Assign Serial0:23 as member
of dialer pool 23. !--- Dialer pool 23 is specified in
interface Dialer 1. !--- Interface Dialer 1 will
terminate the ISDN calls. isdn switch-type primary-ni
isdn incoming-voice modem !--- Switch incoming analog
calls to the internal digital modems. no cdp enable !
interface FastEthernet0 no ip address no ip directed-
broadcast shutdown duplex auto speed auto ! interface
Group-Async0 !--- Async Group Interface for the modems.
ip unnumbered Ethernet0 !--- Unnumbered to the ethernet
interface. no ip directed-broadcast encapsulation ppp
async mode interactive !--- Configures interactive mode
on the asynchronous interfaces. !--- This allows users
to dial in and get to a shell or PPP session on !---
that line. If you want incoming users to only connect
using PPP configure !--- async mode dedicated instead.
peer default ip address pool ASYNC !--- Use the ip pool
named "ASYNC" to assign ip address for !--- incoming
connections. ppp authentication chap group-range 1 48 !-
-- Lines(modems) 1 through 48 are in this group async
interface. ! interface Dialer1 !--- Dialer1 will
terminate ISDN calls. ip unnumbered Ethernet0 no ip
directed-broadcast encapsulation ppp dialer pool 23 !---
Dialer 1 uses dialer pool 23. Interface Serial0:23 is !-
-- a member of this pool. peer default ip address pool
ISDN !--- Use the ip pool named "ISDN" to assign ip
address for !--- incoming connections. no cdp enable ppp
authentication chap ! ip local pool ISDN 172.22.53.142
172.22.53.145 !--- IP address pool named "ISDN". !---
This pool will be assigned to connections on interface
Dialer 1. ip local pool ASYNC 172.22.53.146
172.22.53.149 !--- IP address pool named "ASYNC". !---
This pool will be assigned to incoming connections on
Group-Async 0. !--- Note: This address pool only has 4
addresses and is not sufficient to !--- support all 48
modem lines. Configure your IP pool with the address
range !--- to support all connections. ip classless no
ip http server ! no cdp run ! radius-server host
172.22.53.201 auth-port 1645 acct-port 1646 key cisco !-
-- Radius-server host IP address and encryption key. !--
- The encryption key must match the onbe configured on
the RADIUS server. ! line con 0 exec-timeout 0 0 login
authentication NO_AUTHEN !--- Specifies that the AAA
list name assigned to the console is !--- NO_AUTHEN.
From the AAA configuration above, the list NO_AUTHEN !--
- does not use authentication. transport input none line
1 48 autoselect during-login !--- Displays the
username:password prompt after modems connect. !---
Without this the user must press enter to receive a
prompt. autoselect ppp !--- When the NAS detects
incoming PPP packets, the PPP session !--- will be
launched. modem InOut transport preferred none transport
input all transport output none line aux 0 line vty 0 4
! end
```

验证

此部分提供您能使用验证您的配置的信息。

show 输出示例

```
maui-nas-01#show caller user async_client detail User: async_client, line tty 5, service Async
Active time 00:01:04, Idle time 00:00:22 Timeouts: Absolute Idle Idle Session Exec Limits: - -
00:10:00 Disconnect in: - - - TTY: Line 5, running PPP on As5 Location: PPP: 172.22.53.148 !---
The IP address assigned from the the IP pool. DS0: (slot/unit/channel)=0/0/7 Line: Baud rate
(TX/RX) is 115200/115200, no parity, 1 stopbits, 8 databits Status: Ready, Active, No Exit
Banner, Async Interface Active HW PPP Support Active Capabilities: Hardware Flowcontrol In,
Hardware Flowcontrol Out Modem Callout, Modem RI is CD, Line usable as async interface,
Integrated Modem Modem State: Ready User: async_client, line As5, service PPP Active time
00:00:54, Idle time 00:00:23 Timeouts: Absolute Idle Limits: - - Disconnect in: - - PPP: LCP
Open, CHAP (<- AAA), IPCP !--- CHAP authentication was performed by AAA. LCP: -> peer, ACCM,
AuthProto, MagicNumber, PCompression, ACCompression <- peer, ACCM, MagicNumber, PCompression,
ACCompression NCP: Open IPCP IPCP: <- peer, Address -> peer, Address IP: Local 172.22.53.141,
remote 172.22.53.148 Counts: 40 packets input, 2769 bytes, 0 no buffer 1 input errors, 1 CRC, 0
frame, 0 overrun 24 packets output, 941 bytes, 0 underruns 0 output errors, 0 collisions, 0
interface resets maui-nas-01#show caller user isdn_user detail User: isdn_user, line Se0:8,
service PPP Active time 00:01:22, Idle time 00:01:24 Timeouts: Absolute Idle Limits: - 00:02:00
Disconnect in: - 00:00:35 PPP: LCP Open, CHAP (<- AAA), IPCP !--- CHAP authentication was
performed by AAA. LCP: -> peer, AuthProto, MagicNumber <- peer, MagicNumber NCP: Open IPCP IPCP:
<- peer, Address -> peer, Address Dialer: Connected to , inbound Idle timer 120 secs, idle 84
secs Type is ISDN, group Dialer1 ! -- The ISDN Call uses int Dialer1. IP: Local 172.22.53.141,
remote 172.22.53.142 ! -- The IP address was obtained from the local pool. Counts: 31 packets
input, 872 bytes, 0 no buffer 0 input errors, 0 CRC, 0 frame, 0 overrun 34 packets output, 1018
bytes, 0 underruns 0 output errors, 0 collisions, 5 interface resets
```

故障排除

本部分提供的信息可用于对配置进行故障排除。

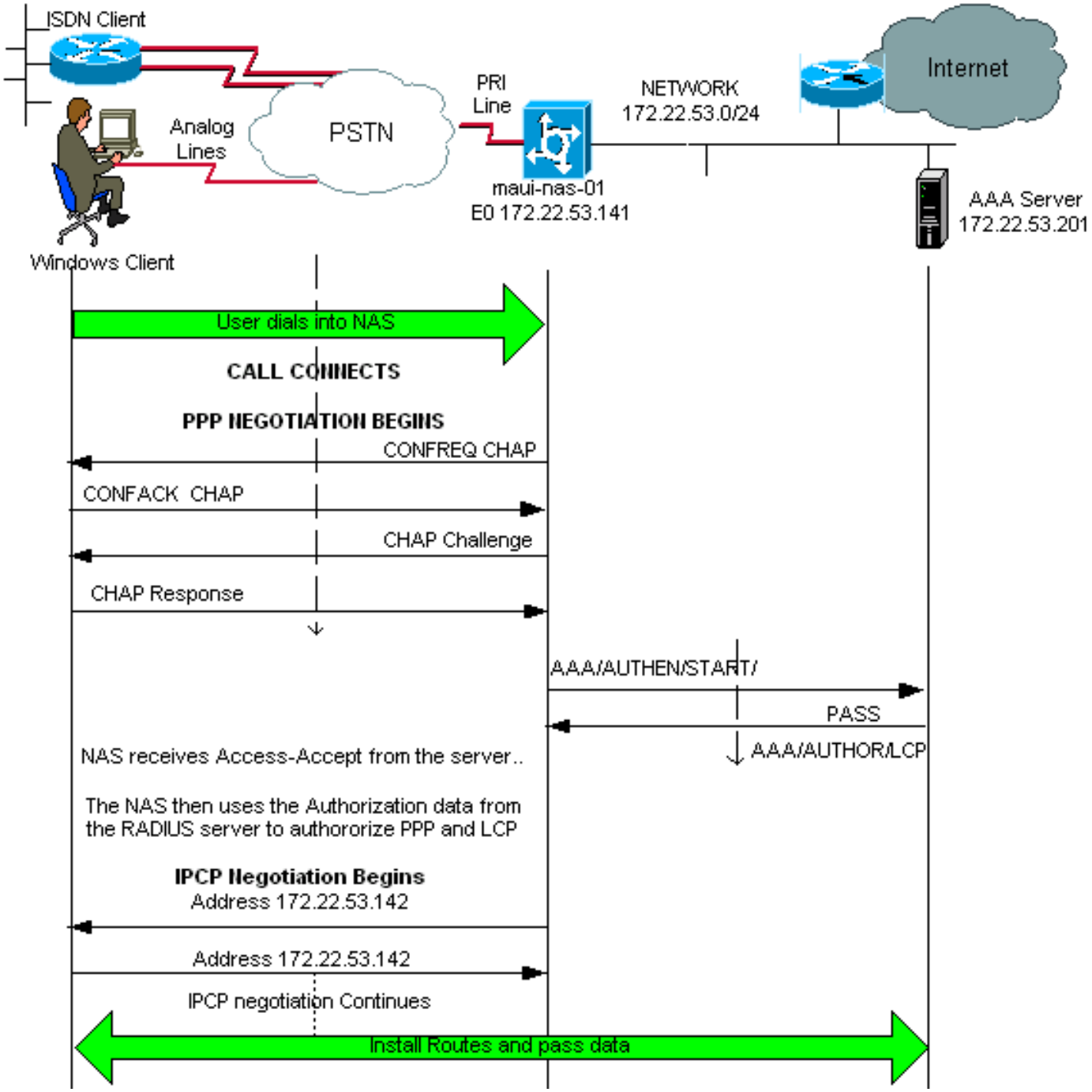
故障排除命令

命令输出解释程序工具（仅限注册用户）支持某些 **show** 命令，使用此工具可以查看对 show 命令输出的分析。

注意： 在发出 **debug** 命令之前，请参阅有关 Debug 命令的重要信息。

- **debug isdn q931** -这表示呼叫建立并且切断ISDN网络连接(在路由器和ISDN交换机之间的层3)。
- **debug modem** -这显示在接入服务器的调制解调器线路活动。
- **debug ppp协商**-显示关于PPP流量和交换的信息，当协商链路控制协议(LCP)时，验证和网络控制协议(NCP)。一个成功的PPP协商协议首先开启LCP状态，然后是鉴权，最后协商NCP。
- debug ppp authentication - 显示PPP验证协议消息，其中包括质询 握手 验证 协议（CHAP）信息包交换以及密码 验证 协议（PAP）交换。
- **debug aaa authentication** -显示关于AAA/RADIUS验证的信息。
- **debug aaa authorization** -显示关于AAA/RADIUS授权的信息。
- **debug radius** -显示详细的调试信息关联与RADIUS。请使用Output Interpreter Tool (仅限注册用户)在思科技术支持网站解码debug radius消息。对于示例，参考如下所示的debug输出。请使用从debug radius的信息确定什么属性协商。**注意**：自debug radius输出已经解码并且的12.2(11)T不要求使用Output Interpreter解码输出。参考本文RADIUS调试增强欲知更多信息
- **show caller user** -表示特定用户的参数例如TTY线路使用的，异步接口(架子、slot或者端口)，DS0信道编号，调制解调器编号，分配的IP地址， PPP和PPP捆绑参数，等等。如果您的Cisco IOS版本软件不支持此指令，请使用**show users**命令。

调试输出示例



如果有输出一**debug radius命令**从您的Cisco设备，您能使用 显示潜在问题和修正。要使用输出结果，您必须是注册用户，并且必须进行登录，还要激活JavaScript。

为了使用输出解释器，您必须是注册用户，登录并启用Javascript

注意： 自debug radius输出已经解码并且的12.2(11)T不要求使用Output Interpreter解码输出。参考本文RADIUS调试增强欲知更多信息

```
maui-nas-01#debug isdn q931 ISDN Q931 packets debugging is on maui-nas-01#debug ppp negotiation
PPP protocol negotiation debugging is on maui-nas-01#debug ppp authentication PPP authentication
debugging is on maui-nas-01#debug modem Modem control/process activation debugging is on maui-
nas-01#debug aaa authentication AAA Authentication debugging is on maui-nas-01#debug aaa
authorization AAA Authorization debugging is on maui-nas-01#debug radius RADIUS protocol
debugging is on maui-nas-01# *Apr 5 11:05:07.031: ISDN Se0:23: RX <- SETUP pd = 8 callref =
0x20FC !--- Setup message for incoming call. *Apr 5 11:05:07.031: Bearer Capability i =
0x8890218F *Apr 5 11:05:07.031: Channel ID i = 0xA18387 *Apr 5 11:05:07.031: Called Party Number
i = 0xA1, '81560' *Apr 5 11:05:07.035: %DIALER-6-BIND: Interface Serial0:6 bound to profile
Dialer1 *Apr 5 11:05:07.035: ISDN Se0:23: TX -> CALL_PROC pd = 8 callref = 0xA0FC *Apr 5
```

```
11:05:07.035: Channel ID i = 0xA98387 *Apr 5 11:05:07.043: %LINK-3-UPDOWN: Interface Serial0:6,
changed state to up *Apr 5 11:05:07.043: Se0:6 PPP: Treating connection as a callin *Apr 5
11:05:07.043: Se0:6 PPP: Phase is ESTABLISHING, Passive Open *Apr 5 11:05:07.043: Se0:6 LCP:
State is Listen *Apr 5 11:05:07.047: ISDN Se0:23: TX -> CONNECT pd = 8 callref = 0xA0FC *Apr 5
11:05:07.047: Channel ID i = 0xA98387 *Apr 5 11:05:07.079: ISDN Se0:23: RX <- CONNECT_ACK pd = 8
callref = 0x20FC *Apr 5 11:05:07.079: ISDN Se0:23: CALL_PROGRESS: CALL_CONNECTED call id 0x2D,
bchan -1, dsl 0 *Apr 5 11:05:07.499: Se0:6 LCP: I CONFREQ [Listen] id 28 len 10 *Apr 5
11:05:07.499: Se0:6 LCP: MagicNumber 0x5078A51F (0x05065078A51F) *Apr 5 11:05:07.499: Se0:6
AAA/AUTHOR/FSM: (0): LCP succeeds trivially *Apr 5 11:05:07.499: Se0:6 LCP: O CONFREQ [Listen]
id 2 len 15 *Apr 5 11:05:07.499: Se0:6 LCP: AuthProto CHAP (0x0305C22305) *Apr 5 11:05:07.499:
Se0:6 LCP: MagicNumber 0xE05213AA (0x0506E05213AA) *Apr 5 11:05:07.499: Se0:6 LCP: O CONFACK
[Listen] id 28 len 10 *Apr 5 11:05:07.499: Se0:6 LCP: MagicNumber 0x5078A51F (0x05065078A51F)
*Apr 5 11:05:07.555: Se0:6 LCP: I CONFACK [ACKsent] id 2 len 15 *Apr 5 11:05:07.555: Se0:6 LCP:
AuthProto CHAP (0x0305C22305) *Apr 5 11:05:07.555: Se0:6 LCP: MagicNumber 0xE05213AA
(0x0506E05213AA) *Apr 5 11:05:07.555: Se0:6 LCP: State is Open *Apr 5 11:05:07.555: Se0:6 PPP:
Phase is AUTHENTICATING, by this end *Apr 5 11:05:07.555: Se0:6 CHAP: O CHALLENGE id 2 len 32
from "maui-nas-01" *Apr 5 11:05:07.631: Se0:6 CHAP: I RESPONSE id 2 len 30 from "isdn_user" !---
Incoming CHAP response from "isdn_user". *Apr 5 11:05:07.631: AAA: parse name=Serial0:6 idb
type=12 tty=-1 *Apr 5 11:05:07.631: AAA: name=Serial0:6 flags=0x51 type=1 shelf=0 slot=0
adapter=0 port=0 channel=6 *Apr 5 11:05:07.631: AAA: parse name= idb type=-1 tty=-1 *Apr 5
11:05:07.631: AAA/MEMORY: create_user (0x619CEE28) user='isdn_user' ruser='' port='Serial0:6'
rem_addr='isdn/81560' authen_type=CHAP service=PPP priv=1 *Apr 5 11:05:07.631: AAA/AUTHEN/START
(2973699846): port='Serial0:6' list='' action=LOGIN service=PPP *Apr 5 11:05:07.631:
AAA/AUTHEN/START (2973699846): using "default" list *Apr 5 11:05:07.631: AAA/AUTHEN
(2973699846): status = UNKNOWN *Apr 5 11:05:07.631: AAA/AUTHEN/START (2973699846): Method=radius
(radius) !--- AAA authentication method is RADIUS. *Apr 5 11:05:07.631: RADIUS: ustruct
sharecount=1 *Apr 5 11:05:07.631: RADIUS: Initial Transmit Serial0:6 id 13 172.22.53.201:1645,
Access-Request, len 87 !--- Access-Request from the NAS to the AAA server. !--- Note the IP
address in the Access-Request matches the IP address !--- configured using the command: !---
radius-server host 172.22.53.201 key cisco *Apr 5 11:05:07.631: Attribute 4 6 AC16358D *Apr 5
11:05:07.631: Attribute 5 6 00004E26 *Apr 5 11:05:07.631: Attribute 61 6 00000002 *Apr 5
11:05:07.631: Attribute 1 11 6973646E *Apr 5 11:05:07.631: Attribute 30 7 38313536 *Apr 5
11:05:07.631: Attribute 3 19 0297959E *Apr 5 11:05:07.631: Attribute 6 6 00000002 *Apr 5
11:05:07.631: Attribute 7 6 00000001 *Apr 5 11:05:07.635: RADIUS: Received from id 13
172.22.53.201:1645, Access-Accept, len 32 *Apr 5 11:05:07.635: Attribute 6 6 00000002 *Apr 5
11:05:07.635: Attribute 7 6 00000001
```

属性值对(AVPs)从**debug radius命令**需要解码改善了解在NAS和RADIUS服务器之间的处理。

注意： 自debug radius输出已经解码并且的12.2(11)T不要求使用Output Interpreter解码输出。参考本文RADIUS调试增强欲知更多信息。

Output Interpreter Tool允许您接收**debug radius**输出的分析。

以下输出以斜体字是从Output Interpreter Tool得到的结果：

```
Access-Request 172.22.53.201:1645 id 13
Attribute Type 4:  NAS-IP-Address is 172.22.53.141
Attribute Type 5:  NAS-Port is 20006
Attribute Type 61: NAS-Port-Type is ISDN-Synchronous
Attribute Type 1:  User-Name is isdn
Attribute Type 30: Called-Station-ID(DNIS) is 8156
Attribute Type 3:  CHAP-Password is (encoded)
Attribute Type 6:  Service-Type is Framed
Attribute Type 7:  Framed-Protocol is PPP
Access-Accept 172.22.53.201:1645 id 13
Attribute Type 6:  Service-Type is Framed
Attribute Type 7:  Framed-Protocol is PPP
```

从工具解码的debug输出，请验证该**Attribute type 6 ：服务类型成帧和Attribute type 7 ：帧协议**是**PPP**。如果注意到属性6或7不是如显示，请更正在RADIUS服务器的用户配置文件(参考配置部分)。并且请注意**debug radius**显示**Access-Accept**，表明RADIUS服务器顺利地验证用户。如果输出显示**访问拒绝**，则用户未验证，并且您应该检查在RADIUS服务器的用户名和密码配置。验证的另一个

属性是**Attribute type 4 ：nas-ip-address**。验证Output Interpreter Tool显示的值匹配在RADIUS服务器配置的NAS IP地址。

注意： 由于Cisco IOS约束和差异在debug输出中用不同的版本，一些属性可能被削(例如，**用户名，Called-Station-ID(DNIS)**)。

```
*Apr  5 11:05:07.635: AAA/AUTHEN (2973699846): status = PASS
!--- Authentication is successful *Apr 5 11:05:07.635: Se0:6 AAA/AUTHOR/LCP: Authorize LCP *Apr
5 11:05:07.635: Se0:6 AAA/AUTHOR/LCP (2783657211): Port='Serial0:6' list='' service=NET *Apr 5
11:05:07.635: AAA/AUTHOR/LCP: Se0:6 (2783657211) user='isdn_user' *Apr 5 11:05:07.635: Se0:6
AAA/AUTHOR/LCP (2783657211): send AV service=ppp *Apr 5 11:05:07.635: Se0:6 AAA/AUTHOR/LCP
(2783657211): send AV protocol=lcp *Apr 5 11:05:07.635: Se0:6 AAA/AUTHOR/LCP (2783657211): found
list "default" *Apr 5 11:05:07.635: Se0:6 AAA/AUTHOR/LCP (2783657211): Method=radius (radius)
*Apr 5 11:05:07.635: Se0:6 AAA/AUTHOR (2783657211): Post authorization status = PASS_REPL *Apr 5
11:05:07.639: Se0:6 AAA/AUTHOR/LCP: Processing AV service=ppp *Apr 5 11:05:07.639: Se0:6 CHAP: O
SUCCESS id 2 len 4 *Apr 5 11:05:07.639: Se0:6 PPP: Phase is UP *Apr 5 11:05:07.639: Se0:6
AAA/AUTHOR/FSM: (0): Can we start IPCP? *Apr 5 11:05:07.639: Se0:6 AAA/AUTHOR/FSM (3184893369):
Port='Serial0:6' list='' service=NET *Apr 5 11:05:07.639: AAA/AUTHOR/FSM: Se0:6 (3184893369)
user='isdn_user' *Apr 5 11:05:07.639: Se0:6 AAA/AUTHOR/FSM (3184893369): send AV service=ppp
*Apr 5 11:05:07.639: Se0:6 AAA/AUTHOR/FSM (3184893369): send AV protocol=ip *Apr 5 11:05:07.639:
Se0:6 AAA/AUTHOR/FSM (3184893369): found list "default" *Apr 5 11:05:07.639: Se0:6
AAA/AUTHOR/FSM (3184893369): Method=radius (radius) *Apr 5 11:05:07.639: Se0:6 AAA/AUTHOR
(3184893369): Post authorization status = PASS_REPL *Apr 5 11:05:07.639: Se0:6 AAA/AUTHOR/FSM:
We can start IPCP *Apr 5 11:05:07.639: Se0:6 IPCP: O CONFREQ [Not negotiated] id 2 len 10 *Apr 5
11:05:07.639: Se0:6 IPCP: Address 172.22.53.141 (0x0306AC16358D) *Apr 5 11:05:07.675: Se0:6
IPCP: I CONFREQ [REQsent] id 13 len 10 *Apr 5 11:05:07.675: Se0:6 IPCP: Address 0.0.0.0
(0x030600000000) *Apr 5 11:05:07.675: Se0:6 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want
0.0.0.0 *Apr 5 11:05:07.675: Se0:6 AAA/AUTHOR/IPCP: Processing AV service=ppp *Apr 5
11:05:07.675: Se0:6 AAA/AUTHOR/IPCP: Authorization succeeded *Apr 5 11:05:07.675: Se0:6
AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 0.0.0.0 *Apr 5 11:05:07.675: Se0:6 IPCP:
Pool returned 172.22.53.142 !--- IP address for the peer obtained from the pool *Apr 5
11:05:07.675: Se0:6 IPCP: O CONFNAK [REQsent] id 13 len 10 *Apr 5 11:05:07.675: Se0:6 IPCP:
Address 172.22.53.142 (0x0306AC16358E) *Apr 5 11:05:07.699: Se0:6 IPCP: I CONFACK [REQsent] id 2
len 10 *Apr 5 11:05:07.699: Se0:6 IPCP: Address 172.22.53.141 (0x0306AC16358D) *Apr 5
11:05:07.707: Se0:6 IPCP: I CONFREQ [ACKrcvd] id 14 len 10 *Apr 5 11:05:07.707: Se0:6 IPCP:
Address 172.22.53.142 (0x0306AC16358E) *Apr 5 11:05:07.707: Se0:6 AAA/AUTHOR/IPCP: Start. Her
address 172.22.53.142, we want 172.22.53.142 *Apr 5 11:05:07.707: Se0:6 AAA/AUTHOR/IPCP
(3828612481): Port='Serial0:6' list='' service=NET *Apr 5 11:05:07.707: AAA/AUTHOR/IPCP: Se0:6
(3828612481) user='isdn_user' *Apr 5 11:05:07.707: Se0:6 AAA/AUTHOR/IPCP (3828612481): send AV
service=ppp *Apr 5 11:05:07.707: Se0:6 AAA/AUTHOR/IPCP (3828612481): send AV protocol=ip *Apr 5
11:05:07.707: Se0:6 AAA/AUTHOR/IPCP (3828612481): send AV addr*172.22.53.142 *Apr 5
11:05:07.707: Se0:6 AAA/AUTHOR/IPCP (3828612481): found list "default" *Apr 5 11:05:07.707:
Se0:6 AAA/AUTHOR/IPCP (3828612481): Method=radius (radius) *Apr 5 11:05:07.707: Se0:6 AAA/AUTHOR
(3828612481): Post authorization status = PASS_REPL *Apr 5 11:05:07.707: Se0:6 AAA/AUTHOR/IPCP:
Reject 172.22.53.142, using 172.22.53.142 *Apr 5 11:05:07.707: Se0:6 AAA/AUTHOR/IPCP: Processing
AV service=ppp *Apr 5 11:05:07.707: Se0:6 AAA/AUTHOR/IPCP: Processing AV addr*172.22.53.142 *Apr
5 11:05:07.707: Se0:6 AAA/AUTHOR/IPCP: Authorization succeeded *Apr 5 11:05:07.707: Se0:6
AAA/AUTHOR/IPCP: Done. Her address 172.22.53.142, we want 172.22.53.142 *Apr 5 11:05:07.707:
Se0:6 IPCP: O CONFACK [ACKrcvd] id 14 len 10 *Apr 5 11:05:07.707: Se0:6 IPCP: Address
172.22.53.142 (0x0306AC16358E) *Apr 5 11:05:07.707: Se0:6 IPCP: State is Open *Apr 5
11:05:07.711: Di1 IPCP: Install route to 172.22.53.142 !--- IPCP state is open. A route to the
remote peer is installed *Apr 5 11:05:08.639: %LINEPROTO-5-UPDOWN: Line protocol on Interface
Serial0:6, changed state to up *Apr 5 11:05:13.043: %ISDN-6-CONNECT: Interface Serial0:6 is now
connected to isdn_user maui-nas-01#
```

这完成ISDN客户端的协商。如下所示的输出显示的协商异步呼叫(例如， Windows客户端)

```
maui-nas-01#
*Apr  5 11:05:53.527: ISDN Se0:23: RX <- SETUP pd = 8 callref = 0x21C5 !--- Incoming Setup
message for Async Call. *Apr 5 11:05:53.527: Bearer Capability i = 0x9090A2 *Apr 5 11:05:53.527:
Channel ID i = 0xA18388 *Apr 5 11:05:53.527: Progress Ind i = 0x8183 - Origination address is
non-ISDN *Apr 5 11:05:53.527: Called Party Number i = 0xA1, '81560' *Apr 5 11:05:53.531: ISDN
Se0:23: TX -> CALL_PROC pd = 8 callref = 0xA1C5 *Apr 5 11:05:53.531: Channel ID i = 0xA98388
```

*Apr 5 11:05:53.531: ISDN Se0:23: TX -> ALERTING pd = 8 callref = 0xA1C5 *Apr 5 11:05:53.667: ISDN Se0:23: TX -> CONNECT pd = 8 callref = 0xA1C5 *Apr 5 11:05:53.683: ISDN Se0:23: RX <- CONNECT_ACK pd = 8 callref = 0x21C5 *Apr 5 11:05:53.687: ISDN Se0:23: CALL_PROGRESS: CALL_CONNECTED call id 0x2E, bchan -1, dsl 0 *Apr 5 11:06:10.815: TTY5: DSR came up *Apr 5 11:06:10.815: tty5: Modem: IDLE->(unknown) *Apr 5 11:06:10.815: TTY5: EXEC creation *Apr 5 11:06:10.815: AAA: parse name=tty5 idb type=10 tty=5 *Apr 5 11:06:10.815: AAA: name=tty5 flags=0x11 type=4 shelf=0 slot=0 adapter=0 port=5 channel=0 *Apr 5 11:06:10.815: AAA: parse name=Serial0:7 idb type=12 tty=-1 *Apr 5 11:06:10.815: AAA: name=Serial0:7 flags=0x51 type=1 shelf=0 slot=0 adapter=0 port=0 channel=7 *Apr 5 11:06:10.815: AAA/MEMORY: create_user (0x614D4DBC) user='' ruser='' port='tty5' rem_addr='async/81560' authen_type=ASCII service=LOGIN priv=1 *Apr 5 11:06:10.815: AAA/AUTHEN/START (2673527044): port='tty5' list='' action=LOGIN service=LOGIN *Apr 5 11:06:10.815: AAA/AUTHEN/START (2673527044): using "default" list *Apr 5 11:06:10.815: AAA/AUTHEN/START (2673527044): Method=radius (radius) *Apr 5 11:06:10.815: AAA/AUTHEN (2673527044): status = GETUSER *Apr 5 11:06:10.815: TTY5: set timer type 10, 30 seconds *Apr 5 11:06:13.475: TTY5: Autoselect(2) sample 7E *Apr 5 11:06:13.475: TTY5: Autoselect(2) sample 7EFF *Apr 5 11:06:13.475: TTY5: Autoselect(2) sample 7EFF7D *Apr 5 11:06:13.475: TTY5: Autoselect(2) sample 7EFF7D23 *Apr 5 11:06:13.475: **TTY5 Autoselect cmd: ppp negotiate** *!--- the router recongnizes the ppp packets and launches ppp.* *Apr 5 11:06:13.475: AAA/AUTHEN/ABORT: (2673527044) because Autoselected. *Apr 5 11:06:13.475: AAA/MEMORY: free_user (0x614D4DBC) user='' ruser='' port='tty5' rem_addr='async/81560' authen_type=ASCII service=LOGIN priv=1 *Apr 5 11:06:13.479: TTY5: EXEC creation *Apr 5 11:06:13.479: TTY5: create timer type 1, 600 seconds *Apr 5 11:06:13.607: TTY5: destroy timer type 1 (OK) *Apr 5 11:06:13.607: TTY5: destroy timer type 0 *Apr 5 11:06:15.607: %LINK-3-UPDOWN: Interface Async5, changed state to up *Apr 5 11:06:15.607: As5 PPP: Treating connection as a dedicated line *Apr 5 11:06:15.607: As5 **PPP: Phase is ESTABLISHING, Active Open** *!--- PPP negotiation begins.* *Apr 5 11:06:15.607: As5 AAA/AUTHOR/FSM: (0): LCP succeeds trivially *Apr 5 11:06:15.607: As5 LCP: O CONFREQ [Closed] id 1 len 25 *Apr 5 11:06:15.607: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:15.607: As5 LCP: AuthProto CHAP (0x0305C22305) *Apr 5 11:06:15.607: As5 LCP: MagicNumber 0xE0531DB8 (0x0506E0531DB8) *Apr 5 11:06:15.607: As5 LCP: PFC (0x0702) *Apr 5 11:06:15.607: As5 LCP: ACFC (0x0802) *Apr 5 11:06:16.487: As5 LCP: I CONFREQ [REQsent] id 3 len 23 *Apr 5 11:06:16.487: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:16.487: As5 LCP: MagicNumber 0x65FFA5C7 (0x050665FFA5C7) *Apr 5 11:06:16.487: As5 LCP: PFC (0x0702) *Apr 5 11:06:16.487: As5 LCP: ACFC (0x0802) *Apr 5 11:06:16.487: As5 LCP: Callback 6 (0x0D0306) *Apr 5 11:06:16.487: Unthrottle 5 *Apr 5 11:06:16.487: As5 LCP: O CONFREJ [REQsent] id 3 len 7 *Apr 5 11:06:16.487: As5 LCP: Callback 6 (0x0D0306) *Apr 5 11:06:17.607: As5 LCP: TIMEout: State REQsent *Apr 5 11:06:17.607: As5 LCP: O CONFREQ [REQsent] id 2 len 25 *Apr 5 11:06:17.607: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:17.607: As5 LCP: AuthProto CHAP (0x0305C22305) *Apr 5 11:06:17.607: As5 LCP: MagicNumber 0xE0531DB8 (0x0506E0531DB8) *Apr 5 11:06:17.607: As5 LCP: PFC (0x0702) *Apr 5 11:06:17.607: As5 LCP: ACFC (0x0802) *Apr 5 11:06:17.735: As5 LCP: I CONFACK [REQsent] id 2 len 25 *Apr 5 11:06:17.735: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:17.735: As5 LCP: AuthProto CHAP (0x0305C22305) *Apr 5 11:06:17.735: As5 LCP: MagicNumber 0xE0531DB8 (0x0506E0531DB8) *Apr 5 11:06:17.735: As5 LCP: PFC (0x0702) *Apr 5 11:06:17.735: As5 LCP: ACFC (0x0802) *Apr 5 11:06:19.479: As5 LCP: I CONFREQ [ACKrcvd] id 4 len 23 *Apr 5 11:06:19.479: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:19.479: As5 LCP: MagicNumber 0x65FFA5C7 (0x050665FFA5C7) *Apr 5 11:06:19.479: As5 LCP: PFC (0x0702) *Apr 5 11:06:19.479: As5 LCP: ACFC (0x0802) *Apr 5 11:06:19.479: As5 LCP: Callback 6 (0x0D0306) *Apr 5 11:06:19.479: As5 LCP: O CONFREJ [ACKrcvd] id 4 len 7 *Apr 5 11:06:19.479: As5 LCP: Callback 6 (0x0D0306) *Apr 5 11:06:19.607: As5 LCP: TIMEout: State ACKrcvd *Apr 5 11:06:19.607: As5 LCP: O CONFREQ [ACKrcvd] id 3 len 25 *Apr 5 11:06:19.607: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:19.607: As5 LCP: AuthProto CHAP (0x0305C22305) *Apr 5 11:06:19.607: As5 LCP: MagicNumber 0xE0531DB8 (0x0506E0531DB8) *Apr 5 11:06:19.607: As5 LCP: PFC (0x0702) *Apr 5 11:06:19.607: As5 LCP: ACFC (0x0802) *Apr 5 11:06:19.607: As5 LCP: I CONFREQ [REQsent] id 5 len 20 *Apr 5 11:06:19.607: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:19.607: As5 LCP: MagicNumber 0x65FFA5C7 (0x050665FFA5C7) *Apr 5 11:06:19.607: As5 LCP: PFC (0x0702) *Apr 5 11:06:19.607: As5 LCP: ACFC (0x0802) *Apr 5 11:06:19.607: As5 LCP: O CONFACK [REQsent] id 5 len 20 *Apr 5 11:06:19.607: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:19.607: As5 LCP: MagicNumber 0x65FFA5C7 (0x050665FFA5C7) *Apr 5 11:06:19.607: As5 LCP: PFC (0x0702) *Apr 5 11:06:19.607: As5 LCP: ACFC (0x0802) *Apr 5 11:06:19.719: As5 LCP: I CONFACK [ACKsent] id 3 len 25 *Apr 5 11:06:19.719: As5 LCP: ACCM 0x000A0000 (0x0206000A0000) *Apr 5 11:06:19.719: As5 LCP: AuthProto CHAP (0x0305C22305) *Apr 5 11:06:19.719: As5 LCP: MagicNumber 0xE0531DB8 (0x0506E0531DB8) *Apr 5 11:06:19.719: As5 LCP: PFC (0x0702) *Apr 5 11:06:19.719: As5 LCP: ACFC (0x0802) *Apr 5 11:06:19.719: As5 LCP: State is Open *Apr 5 11:06:19.719: As5 PPP: Phase is AUTHENTICATING, by this end *Apr 5 11:06:19.719: As5 CHAP: O CHALLENGE id 1 len 32 from "maui-nas-01" *Apr 5 11:06:19.863: As5 **CHAP: I RESPONSE id 1 len 33 from "async_client"** *!--- Incoming*

CHAP response from "async_client". *Apr 5 11:06:19.863: AAA: parse name=Async5 idb type=10 tty=5 *Apr 5 11:06:19.863: AAA: name=Async5 flags=0x11 type=4 shelf=0 slot=0 adapter=0 port=5 channel=0 *Apr 5 11:06:19.863: AAA: parse name=Serial0:7 idb type=12 tty=-1 *Apr 5 11:06:19.863: AAA: name=Serial0:7 flags=0x51 type=1 shelf=0 slot=0 adapter=0 port=0 channel=7 *Apr 5 11:06:19.863: AAA/MEMORY: create_user (0x6195AE40) user='async_client' ruser='' port='Async5' rem_addr='async/81560' authen_type=CHAP service=PPP priv=1 *Apr 5 11:06:19.863: AAA/AUTHEN/START (2673347869): port='Async5' list='' action=LOGIN service=PPP *Apr 5 11:06:19.863: AAA/AUTHEN/START (2673347869): using "default" list *Apr 5 11:06:19.863: AAA/AUTHEN (2673347869): status = UNKNOWN *Apr 5 11:06:19.863: AAA/AUTHEN/START (2673347869): Method=radius (radius) *Apr 5 11:06:19.863: RADIUS: ustruct sharecount=1 ***Apr 5 11:06:19.867: RADIUS: Initial Transmit Async5 id 14 172.22.53.201:1645, Access-Request, len 90 *Apr 5 11:06:19.867: Attribute 4 6 AC16358D *Apr 5 11:06:19.867: Attribute 5 6 00000005 *Apr 5 11:06:19.867: Attribute 61 6 00000000 *Apr 5 11:06:19.867: Attribute 1 14 6173796E *Apr 5 11:06:19.867: Attribute 30 7 38313536 *Apr 5 11:06:19.867: Attribute 3 19 01B8292F *Apr 5 11:06:19.867: Attribute 6 6 00000002 *Apr 5 11:06:19.867: Attribute 7 6 00000001 *Apr 5 11:06:19.867: RADIUS: Received from id 14 172.22.53.201:1645, Access-Accept, len 32 *Apr 5 11:06:19.867: Attribute 6 6 00000002 *Apr 5 11:06:19.871: Attribute 7 6 00000001**

从debug radius命令需要的AVPs解码改善了解在NAS和RADIUS服务器之间的处理。

注意： 自debug radius输出已经解码并且的12.2(11)T不要求使用Output Interpreter解码输出。参考本文RADIUS调试增强欲知更多信息

Output Interpreter Tool允许您接收debug radius输出的分析。

以下输出以斜体字是从Output Interpreter Tool得到的结果：

```
Access-Request 172.22.53.201:1645 id 14
Attribute Type 4:  NAS-IP-Address is 172.22.53.141
Attribute Type 5:  NAS-Port is 5
Attribute Type 61: NAS-Port-Type is Asynchronous
Attribute Type 1:  User-Name is asyn
Attribute Type 30: Called-Station-ID(DNIS) is 8156
Attribute Type 3:  CHAP-Password is (encoded)
Attribute Type 6:  Service-Type is Framed
Attribute Type 7:  Framed-Protocol is PPP
         Access-Accept 172.22.53.201:1645 id 14
Attribute Type 6:  Service-Type is Framed
Attribute Type 7:  Framed-Protocol is PPP
```

从工具解码的debug输出，请验证该**Attribute type 6 ：服务类型成帧和Attribute type 7 ：帧协议**是**PPP**。如果注意到属性6或7不是如显示，请更正在RADIUS服务器的用户配置文件(参考配置部分)。并且请注意**debug radius**显示**Access-Accept**，表明RADIUS服务器顺利地验证用户。如果输出显示**访问拒绝**，则用户未验证，并且您应该检查在RADIUS服务器的用户名和密码配置。验证的另一个属性是**Attribute type 4 ：nas-ip-address**。验证Output Interpreter Tool显示的值匹配在RADIUS服务器配置的NAS IP地址。

注意： 由于Cisco IOS约束和差异在debug输出中用不同的版本，一些属性可能被削(例如，**用户名，Called-Station-ID(DNIS)**)。

```
*Apr  5 11:06:19.871: AAA/AUTHEN (2673347869): status = PASS
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/LCP: Authorize LCP
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/LCP (3232903941): Port='Async5' list=''
service=NET
*Apr  5 11:06:19.871: AAA/AUTHOR/LCP: As5 (3232903941) user='async_client'
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/LCP (3232903941): send AV service=ppp
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/LCP (3232903941): send AV protocol=lcp
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/LCP (3232903941): found list "default"
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/LCP (3232903941): Method=radius (radius)
*Apr  5 11:06:19.871: As5 AAA/AUTHOR (3232903941): Post authorization status
= PASS_REPL
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/LCP: Processing AV service=ppp
```

```
*Apr  5 11:06:19.871: As5 CHAP: O SUCCESS id 1 len 4
*Apr  5 11:06:19.871: As5 PPP: Phase is UP
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/FSM: (0): Can we start IPCP?
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/FSM (1882093345): Port='Async5' list=''
service=NET
*Apr  5 11:06:19.871: AAA/AUTHOR/FSM: As5 (1882093345) user='async_client'
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/FSM (1882093345): send AV service=ppp
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/FSM (1882093345): send AV protocol=ip
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/FSM (1882093345): found list "default"
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/FSM (1882093345): Method=radius (radius)
*Apr  5 11:06:19.871: As5 AAA/AUTHOR (1882093345): Post authorization status
= PASS_REPL
*Apr  5 11:06:19.871: As5 AAA/AUTHOR/FSM: We can start IPCP
*Apr  5 11:06:19.875: As5 IPCP: O CONFREQ [Closed] id 1 len 10
*Apr  5 11:06:19.875: As5 IPCP:    Address 172.22.53.141 (0x0306AC16358D)
*Apr  5 11:06:19.991: As5 IPCP: I CONFREQ [REQsent] id 1 len 34
*Apr  5 11:06:19.991: As5 IPCP:    Address 0.0.0.0 (0x030600000000)
*Apr  5 11:06:19.991: As5 IPCP:    PrimaryDNS 0.0.0.0 (0x810600000000)
*Apr  5 11:06:19.991: As5 IPCP:    PrimaryWINS 0.0.0.0 (0x820600000000)
*Apr  5 11:06:19.991: As5 IPCP:    SecondaryDNS 0.0.0.0 (0x830600000000)
*Apr  5 11:06:19.991: As5 IPCP:    SecondaryWINS 0.0.0.0 (0x840600000000)
*Apr  5 11:06:19.991: As5 AAA/AUTHOR/IPCP: Start.  Her address 0.0.0.0,
```

we want 172.22.53.148 *!--- The address for the peer obtained from the pool.* *Apr 5 11:06:19.991: As5 AAA/AUTHOR/IPCP: Processing AV service=ppp *Apr 5 11:06:19.991: As5 AAA/AUTHOR/IPCP: Authorization succeeded *Apr 5 11:06:19.991: As5 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 172.22.53.148 *Apr 5 11:06:19.991: As5 IPCP: O CONFREJ [REQsent] id 1 len 22 *Apr 5 11:06:19.991: As5 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000) *Apr 5 11:06:19.995: As5 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000) *Apr 5 11:06:19.995: As5 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000) *Apr 5 11:06:20.007: As5 IPCP: I CONFACK [REQsent] id 1 len 10 *Apr 5 11:06:20.007: As5 IPCP: Address 172.22.53.141 (0x0306AC16358D) *Apr 5 11:06:20.119: As5 IPCP: I CONFREQ [ACKrcvd] id 2 len 16 *Apr 5 11:06:20.119: As5 IPCP: Address 0.0.0.0 (0x030600000000) *Apr 5 11:06:20.119: As5 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000) *Apr 5 11:06:20.119: As5 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 172.22.53.148 *Apr 5 11:06:20.119: As5 AAA/AUTHOR/IPCP: Processing AV service=ppp *Apr 5 11:06:20.119: As5 AAA/AUTHOR/IPCP: Authorization succeeded *Apr 5 11:06:20.119: As5 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 172.22.53.148 *Apr 5 11:06:20.119: As5 IPCP: O CONFNAK [ACKrcvd] id 2 len 16 *Apr 5 11:06:20.119: As5 IPCP: Address 172.22.53.148 (0x0306AC163594) *Apr 5 11:06:20.119: As5 IPCP: PrimaryDNS 172.22.53.210 (0x8106AC1635D2) *Apr 5 11:06:20.231: As5 IPCP: I CONFREQ [ACKrcvd] id 3 len 16 *Apr 5 11:06:20.231: As5 IPCP: Address 172.22.53.148 (0x0306AC163594) *Apr 5 11:06:20.231: As5 IPCP: PrimaryDNS 172.22.53.210 (0x8106AC1635D2) *Apr 5 11:06:20.231: As5 AAA/AUTHOR/IPCP: Start. Her address 172.22.53.148, we want 172.22.53.148 *Apr 5 11:06:20.231: As5 AAA/AUTHOR/IPCP (3727543204): Port='Async5' list='' service=NET *Apr 5 11:06:20.231: AAA/AUTHOR/IPCP: As5 (3727543204) user='async_client' *Apr 5 11:06:20.231: As5 AAA/AUTHOR/IPCP (3727543204): send AV service=ppp *Apr 5 11:06:20.231: As5 AAA/AUTHOR/IPCP (3727543204): send AV protocol=ip *Apr 5 11:06:20.231: As5 AAA/AUTHOR/IPCP (3727543204): send AV addr*172.22.53.148 *Apr 5 11:06:20.231: As5 AAA/AUTHOR/IPCP (3727543204): found list "default" *Apr 5 11:06:20.231: As5 AAA/AUTHOR/IPCP (3727543204): Method=radius (radius) *Apr 5 11:06:20.235: As5 AAA/AUTHOR (3727543204): Post authorization status = PASS_REPL *Apr 5 11:06:20.235: As5 AAA/AUTHOR/IPCP: Reject 172.22.53.148, using 172.22.53.148 *Apr 5 11:06:20.235: As5 AAA/AUTHOR/IPCP: Processing AV service=ppp *Apr 5 11:06:20.235: As5 AAA/AUTHOR/IPCP: Processing AV addr*172.22.53.148 *Apr 5 11:06:20.235: As5 AAA/AUTHOR/IPCP: Authorization succeeded *Apr 5 11:06:20.235: As5 AAA/AUTHOR/IPCP: Done. Her address 172.22.53.148, we want 172.22.53.148 *Apr 5 11:06:20.235: As5 IPCP: O CONFACK [ACKrcvd] id 3 len 16 *Apr 5 11:06:20.235: As5 IPCP: Address 172.22.53.148 (0x0306AC163594) *Apr 5 11:06:20.235: As5 IPCP: PrimaryDNS 172.22.53.210 (0x8106AC1635D2) *Apr 5 11:06:20.235: As5 IPCP: State is Open *Apr 5 11:06:20.235: **As5 IPCP: Install route to 172.22.53.148** *!--- Route to remote peer is installed.* *Apr 5 11:06:20.871: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async5, changed state to up

相关信息

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