配置 PC 作为使用 L3 SSG/SSD 的 PPPoA 客户端

目录

简介

本文档中描述的示例配置显示了使用异步传输模式(PPPoA)上的点对点协议访问互联网服务提供商 (ISP)网络的远程客户端。

远程客户端希望使用第3层服务选择网关/服务选择控制面板(SSG/SSD)访问第2层隧道协议(L2TP)服务。 L2TP服务在主机IP地址为15.15.15.5的配置中表示。使用动态主机配置协议(DHCP),Cisco 677从IP地址池10.0.0.2到10.0.0.25为PC提供IP地址4，掩码为255.255.255.0。此外，Cisco 677上启用了端口地址转换(PAT)。

此示例配置有三个测试：

- 远程客户端在服务登录的不同步骤期间进行的与SSG相关的调试。
- 单点登录SSD 2.5.1功能。
- 启用SSD调试。

开始使用前

规则

有关文档规则的详细信息，请参阅 Cisco 技术提示规则。

先决条件

本文档没有任何特定的前提条件。

使用的组件

本文档中的信息基于以下软件和硬件版本。

- 思科C6400R软件(C6400R-G4P5-M)，版本12.1(5)DC1
- Cisco 7200软件(C7200-IS-M)，版本12.2(1)

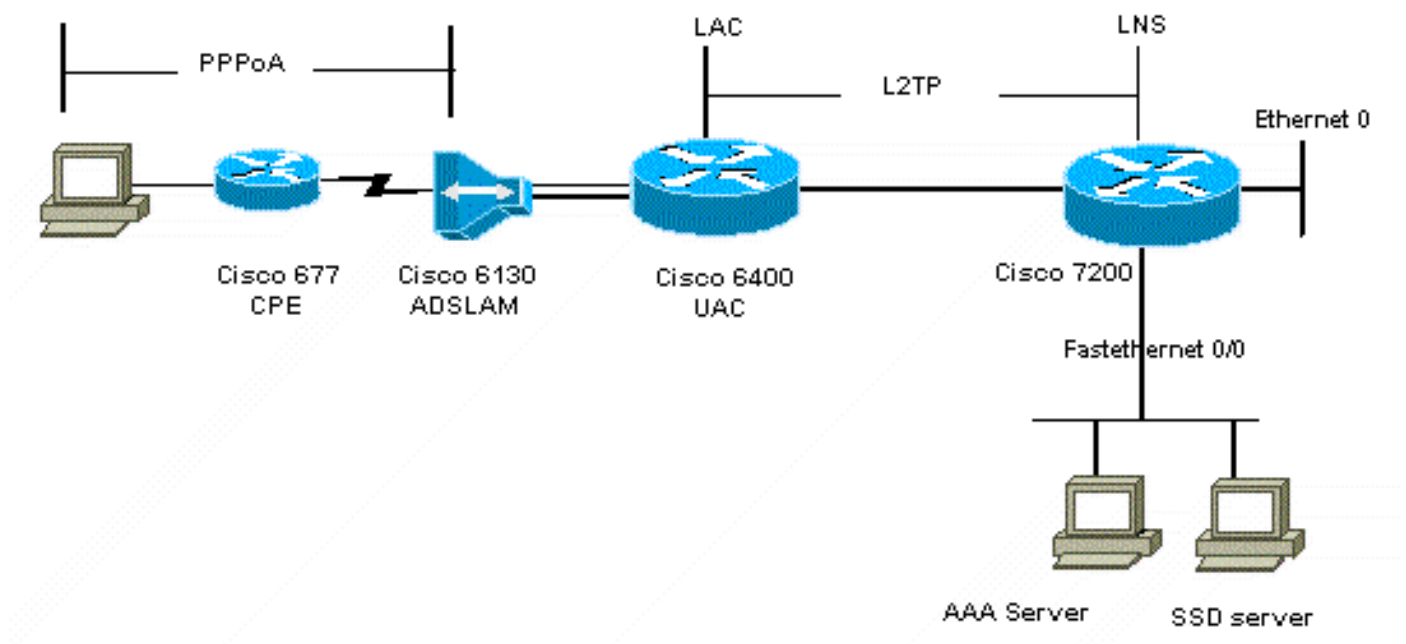本文档中的信息都是基于特定实验室环境中的设备创建的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您是在真实网络上操作，请确保您在使用任何命令前已经了解其潜在影响。

配置

本部分提供有关如何配置本文档所述功能的信息。

注：要查找有关本文档中使用的命令的其他信息，请使用命令查找工具(仅注册客户)。

网络图

本文档使用下图所示的网络设置。

配置

本文档使用如下所示的配置。

- [Cisco 6400 LAC(airelle_nrp3)](#)
- [Cisco 7204 LNS（主机名或）](#)
- [Cisco 677](#)

Cisco 6400 LAC(airelle_nrp3)

```
Building configuration...


Current configuration : 125008 bytes
!
! Last configuration change at 02:11:30 UTC Mon Jun 18
2001
! NVRAM config last updated at 00:43:51 UTC Mon Jun 18
2001
!
version 12.1
no service single-slot-reload-enable
service timestamps debug datetime msec
service timestamps log uptime
no service password-encryption
!
hostname arielle_nrp3
!
boot system tftp c6400r-g4p5-mz.121-5.DC1 172.17.247.195
logging rate-limit console 10 except errors
aaa new-model
aaa authentication login default none
aaa authentication login tty enable
aaa authentication ppp ayman group radius
aaa nas port extended
enable password ww
!
username ayman@cairo.com password 0 ayman
redundancy
main-cpu
 auto-sync standard
no secondary console enable
ip subnet-zero
ip cef
no ip finger
no ip domain-lookup
!
!
vpdn enable
no vpdn logging
vpdn search-order domain
!
!
ssg enable
ssg default-network 10.200.56.0 255.255.255.0
ssg service-password cisco
ssg radius-helper auth-port 1645 acct-port 1646
ssg radius-helper key cisco
ssg next-hop download nxthoptbl cisco
ssg bind direction downlink Virtual-Template66
ssg service-search-order remote local
!
!
```

```
interface Loopback3
ip address 200.200.200.1 255.255.255.252
!
!
interface ATM0/0/0.61 point-to-point
description LAC L2TP connection to Ior
ip address 14.14.14.6 255.255.255.252
pvc 61/61
 broadcast
 encapsulation aal5snap
!
!
!
interface ATM0/0/0.5555 multipoint
pvc 66/66
 encapsulation aal5mux ppp Virtual-Template66
!
!
!
interface Ethernet0/0/1
no ip address
!
interface Ethernet0/0/0
ip address 3.0.0.2 255.255.255.0
no ip mroute-cache
shutdown
tag-switching ip
!
interface FastEthernet0/0/0
ip address 10.200.56.6 255.255.255.0
no ip mroute-cache
half-duplex
!
!
interface Virtual-Template66
ip unnumbered Loopback3
peer default ip address pool ayman
ppp authentication pap ayman
!
!
router eigrp 5
network 14.14.14.4 0.0.0.3
no auto-summary
no eigrp log-neighbor-changes
!
ip local pool ayman 212.93.193.114 212.93.193.126
ip route 10.0.0.0 255.255.255.0 212.93.193.114
!
radius-server host 10.200.56.16 auth-port 1645 acct-port
1646
radius-server retransmit 3
radius-server attribute 25 nas-port format d
radius-server attribute nas-port format d
radius-server key cisco
!
!
line con 0
exec-timeout 0 0
login authentication tty
transport input none
line aux 0
line vty 0 4
exec-timeout 0 0
password ww
```

```
login authentication tty
!
end
```

Cisco 7204 LNS（主机名或）

```
Building configuration...

Current configuration : 6769 bytes
!
version 12.2
no service single-slot-reload-enable
service timestamps debug datetime msec localtime show-
timezone
service timestamps log datetime localtime show-timezone
no service password-encryption
!
hostname ior
!
boot system flash c7200-is-mz.122-1.bin
logging buffered 16384 debugging
logging rate-limit console 10 except errors
aaa new-model
aaa authentication login default none
aaa authentication login tty enable
aaa authentication ppp ayman local
aaa nas port extended
enable password 7 03134C
!
username ayman@cairo.com password 0 ayman
clock timezone GMT+1 1
clock summer-time PDT recurring
ip subnet-zero
no ip source-route
ip cef
!
!
no ip finger
ip tcp window-size 8192
ip ftp username tftp
ip ftp password 7 061118
ip host rund 172.17.247.195
ip host PAGENT-SECURITY-V3 57.63.30.76 95.26.0.0
!
!
!
!
!
vpdn enable
no vpdn logging
vpdn search-order domain
!
vpdn-group 1
accept-dialin
  protocol l2tp
  virtual-template 24
terminate-from hostname nap
local name cairo
l2tp tunnel password 7 052827261363
!
!
interface Loopback1
ip address 212.93.194.5 255.255.255.252
```

```
!
interface Loopback2
ip address 15.15.15.5 255.255.255.252
!
!
interface FastEthernet0/0
ip address 10.200.56.2 255.255.255.0
ip ospf network point-to-multipoint
no ip mroute-cache
load-interval 60
duplex half
no cdp enable
!
interface ATM2/0
no ip mroute-cache
atm pvc 1 0 5 qsaal
atm pvc 2 0 16 ilmi
no atm ilmi-keepalive
!
!
!
!
!
interface ATM2/0.61 point-to-point
description L2TP tunnel link
ip address 14.14.14.5 255.255.255.252
pvc 61/61
  broadcast
  encapsulation aal5snap
!
!
interface ATM2/0.5555 multipoint
pvc 55/55
  encapsulation aal5mux ppp Virtual-Template24
!
!
!
interface Virtual-Template24
ip unnumbered Loopback1
peer default ip address pool SSG-L2TP
ppp authentication pap ayman
!
!
router eigrp 5
network 14.14.14.4 0.0.0.3
network 15.15.15.4 0.0.0.3
no auto-summary
no eigrp log-neighbor-changes
!
!
ip route 212.93.193.112 255.255.255.252 14.14.14.6
ip local pool SSG-L2TP 212.93.197.114 212.93.197.126
radius-server host 10.200.56.16 auth-port 1645 acct-port
1646
radius-server retransmit 3
radius-server attribute 25 nas-port format d
radius-server attribute nas-port format d
radius-server key cisco
radius-server vsa send accounting
radius-server vsa send authentication
!
!
!
!
```

```
line con 0
exec-timeout 0 0
password 7 010411
login authentication tty
transport input none
line aux 0
password 7 021113
line vty 0 4
exec-timeout 0 0
password 7 010411
login authentication tty
line vty 5 15
!
end
!
```

在实施新配置之前，必须将Cisco 677重置为其默认配置。要恢复默认配置，请使用set nvram erase命令；例如：

```
cbos#set nvram erase
Erasing running configuration.
You must use "write" for changes to be permanent.

cbos#write
NVRAM written.

cbos#reboot
```

在思科677思科宽带操作系统(CBOS)上启用DHCP服务器功能会自动创建名为"pool0"的池，并分配掩码为255.255.255.0的子网10.0.0.0。默认情况下，思科677以太网接口的IP地址为分配了地址10.0.0.1，然后"pool0"可以为本地LAN客户端/PC租用10.0.0.2到10.0.0.254之间的IP地址。

Cisco 677
!--- This configuration must be done !--- after NVRAM has been erased. set ppp wanipcp 0.0.0.0 set ppp wan0-0 login hisham set ppp wan0-0 password hisham set dhcp server enabled set nat enabled set int wan0-0 close set int wan0-0 vpi 1 set int wan0-0 vci 60 set int wan0-0 open write reboot

RADIUS 配置文件

以下远程拨入用户服务(RADIUS)配置文件适用于远程用户和服务。

- 远程用户Hisham的配置文件
- 服务组差旅概况
- 服务组城市概况
- cairo.com服务简档
- 下一跳表的配置文件

远程用户Hisham的配置文件
root@canonball[/opt/csecure/CLI]ViewProfile -p 9900 -u

```
hisham
User Profile Information
user = hisham{
profile_id = 119
profile_cycle = 11
member = ayman
radius=SSG-6400 {
check_items= {
2=hisham
}
reply_attributes= {
6=2
7=1
9,250="GTravelling"
}
}
}
```

服务组差旅概况

```
root@canonball[/opt/csecure/CLI]ViewProfile -p 9900 -u
Travelling
User Profile Information
user = Travelling{
profile_id = 165
profile_cycle = 3
member = Services
radius=SSG-6400 {
check_items= {
2=cisco
}
reply_attributes= {
6=5
9,250="IMiddle East"
9,250="GCities"
}
}
}
```

服务组城市概况

```
User Profile Information
user = Cities{
profile_id = 167
profile_cycle = 3
member = Services
radius=SSG-6400 {
check_items= {
2=cisco
}
reply_attributes= {
6=5
9,250="ICairo"
9,250="Ncairo.com"
}
}
}
```

cairo.com服务简档

```
root@canonball[/opt/csecure/CLI]ViewProfile -p 9900 -u
cairo.com
User Profile Information
```

```
user = cairo.com{
profile_id = 144
profile_cycle = 17
member = Services
radius=SSG-6400 {
check_items= {
2=cisco
}
reply_attributes= {
6=5
9,1="vpdn:tunnel-id=nap"
9,1="vpdn:l2tp-tunnel-password=CAIRO"
9,1="vpdn:tunnel-type=l2tp"
9,1="vpdn:ip-addresses=15.15.15.5"
9,251="Ocairo.com"
9,251="R15.15.15.4;255.255.255.252"
9,251="TT"
9,251="IEgyptian Capital"
9,251="Gcairo.com_key"
}
}
}
```

下一跳表的配置文件

```
root@canonball[/opt/csecure/CLI]ViewProfile -p 9900 -u
nxthoptbl
User Profile Information
user = nxthoptbl{
profile_id = 168
profile_cycle = 2
member = Services
radius=SSG-6400 {
check_items= {
2=cisco
}
reply_attributes= {
6=5
9,253="Gcairo.com_key;14.14.14.5"
}
}
}
```

验证

当前没有可用于此配置的验证过程。

故障排除

单一登录 SSD 2.5.1的 特性是什么？

此功能适用于SSD服务器。当SSD服务器在其缓存数据库中找不到发送HTTP流量的远程客户端的主机对象时，它会向SSG发送访问请求。如果SSG有主机对象，它会向SSD发送访问接受消息。然后，用户可以授予对服务的访问权限。

如果SSD或SSG上没有主机对象，则用户应使用正常的SSD登录身份验证过程在SSD上进行身份验证。

配置 SSG 和 SSD 之前，需要了解什么？

在配置SSD或SSG之前，您必须验证以下内容：

- SSD、SSG和身份验证、授权和记帐(AAA)都在运行，所有网络实体都可以相互执行ping操作。
- 远程用户可以在登录到SSD服务器之前ping默认网络(SSG、SSD、AAA)中的任何主机。
- 网络接入提供商(NAP)（本例中为Cisco 6400 NRP1）可以ping服务目标网络。
- 远程客户端无法ping远程服务目标网络。

在起动 PPPoA 会话之后和设置 SSD 登录之前应做什么？

配置所有SSG命令后，您必须验证是否已成功下载用户服务的下一跳表。发出show ssg binding命令。

```
arielle_nrp3# show ssg binding
cairo.com_key         -> 14.14.14.5 (NHT)

arielle_nrp3# show ssg next-hop
Next hop table loaded from profile nxthoptbl:
cairo.com_key         -> 14.14.14.5
End of next hop table.
```

检查SSG上所有方向绑定是否都处于活动状态。

```
arielle_nrp3# show ssg direction
Virtual-Template66: Downlink
!--- You can verify this by enabling debug ssg ctrl-events after the !--- remote user tries to
initiate its PPPoA session to access the NRP.

Jun 18 02:13:12.791: SSG-CTL-EVN: Handling PPP logon for user hisham.
Jun 18 02:13:12.791: SSG-CTL-EVN: Locate/create SSG sub-block from/for Virtual-Access3.
Jun 18 02:13:12.791: SSG-CTL-EVN: Checking for old HostObject in the sub-block.
Jun 18 02:13:12.791: SSG-CTL-EVN:  SSG: pppterm: NO extra data for PPP logon
Jun 18 02:13:12.791: SSG-CTL-EVN: Authenticating user hisham for PPP logon.
Jun 18 02:13:12.799: SSG-CTL-EVN: Creating HostObject for the PPP user hisham.
Jun 18 02:13:12.799: SSG-CTL-EVN: Set Host Mac Address .
Jun 18 02:13:12.799: SSG-CTL-EVN: ** attr->type = 6
Jun 18 02:13:12.799: SSG-CTL-EVN: ATTR_LOOP = 1
Jun 18 02:13:12.799: SSG-CTL-EVN: ** attr->type = 7
Jun 18 02:13:12.799: SSG-CTL-EVN: ATTR_LOOP = 2
Jun 18 02:13:12.799: SSG-CTL-EVN: ATTR_LOOP = 3
Jun 18 02:13:12.799: SSG-CTL-EVN: ATTR_LOOP = 4
Jun 18 02:13:12.799: SSG-CTL-EVN: PPP logon for user hisham is accepted.
The link is Virtual-Access3
Jun 18 02:13:12.799: SSG-CTL-EVN: Bind the HostObject to Virtual-Access3.
 !--- Downlink binding success. Jun 18 02:13:12.867: SSG-CTL-EVN: IPCP is up. Locate SSG sub-
block from Virtual-Access3. Jun 18 02:13:12.871: SSG-CTL-EVN: Locate HostObject from the sub-
block. Jun 18 02:13:12.871: SSG-CTL-EVN: Set Host IP 212.93.193.114. !--- Host object is
created. Jun 18 02:13:12.879: SSG-CTL-EVN: Host Mac Address lookup failed Jun 18 02:13:12.879:
SSG-CTL-EVN: Activate the HostObject. Link=Virtual-Access3 !--- Host object is active. Jun 18
02:13:12.879: SSG-CTL-EVN: #### ssg_l2tp_ip_up: 03:49:01: %LINEPROTO-5-UPDOWN: Line protocol on
Interface Virtual-Access3, changed state to up
```

当客户端启动到SSD服务器的HTTP会话时，用户将看到SSD服务器登录主页。

注意：切记要通过发出UNIX shell命令root@crazyball[/export/home/ssd251/ssd]startSSD.sh启动SSD服务器操作。

如何测试 SSD 单一登录功能？

1. 在dashboard.conf文件中配置参数(REAUTHENTICATE=off)。默认值为 REAUTHENTICATE=on。
2. 登录SSD上的任何网页。例如，当您登录到cairo.com服务主页时，请关闭浏览器，然后使用 http://10.200.56.40:8080再次打开。

SSD上的主机对象仍在缓存中，因此您应该能够重新登录之前登录的SSD服务页面。默认行为是在SSD上重新进行身份验证；即，您必须访问SSD登录主页。

如何运行 SSD 调试？

1. 在浏览器的地址栏中键入**https://10.200.56.40:8443/log**。
2. 单击"**设置选项**"。您选择运行的所有调试以及输出记录在日志文件中。日志文件名的格式 `yy_mm_dd.request.log`。
3. 导航至日志文件所在的SSD服务器上的目录。
4. 使用UNIX编辑器打开文件/export/home/ssd251/ssd/logs]vi yy_mm_dd.request.log以查看调试输出。

调试输出示例

NRP1 输出

```
arielle_nrp3# show debugging
SSG:
SSG data path packets debugging is on
SSG control path events debugging is on
SSG control path packets debugging is on
SSG packets debugging is on
Radius protocol debugging is on
Just before the SSD logon, the output of these debugs are :
Jun 18 23:30:08.414:
SSG-DATA:CEF-SSGSubBlock=0(AT0/0/0.61:0.0.0.0->0.0.0.0)
Jun 18 23:30:09.530:
SSG-DATA:CEF-FIB_FLAG_RECEIVE=1(Vi3:212.93.193.114->10.200.56.6)
Jun 18 23:30:11.142:
SSG-DATA:CEF-SSGSubBlock=0(AT0/0/0.61:0.0.0.0->0.0.0.0)
Jun 18 23:30:11.494:
SSG-DATA:CEF-FIB_FLAG_RECEIVE=1(Vi3:212.93.193.114->10.200.56.6)
Jun 18 23:30:12.482:
SSG-DATA:CEF-FIB_FLAG_RECEIVE=1(Vi3:212.93.193.114->10.200.56.6)
Jun 18 23:30:13.310:
SSG-DATA:CEF-SSGSubBlock=0(AT0/0/0.61:0.0.0.0->0.0.0.0)
Jun 18 23:30:14.462:

Jun 18 23:39:39.610: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.638:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 18 23:39:39.638:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 18 23:39:39.642: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
```

```
Jun 18 23:39:39.642:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 18 23:39:39.646: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.674:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 18 23:39:39.678:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 18 23:39:39.678: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.682:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 18 23:39:39.686:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 18 23:39:39.686: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.698: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.742: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.926: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.926: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.926: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 18 23:39:39.926: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)


Jun 19 00:39:17.477: RADIUS: Initial Transmit  id 18 10.200.56.16:1645,
Access-Request, len 58
Jun 19 00:39:17.477:          Attribute 4 6 D45DC301
Jun 19 00:39:17.477:          Attribute 61 6 00000000
Jun 19 00:39:17.477:          Attribute 1 8 68697368
Jun 19 00:39:17.477:          Attribute 2 18 31B0CDC2
Jun 19 00:39:17.481: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 19 00:39:17.481: RADIUS: Received from id 18 10.200.56.16:1645,
Access-Accept, len 70
Jun 19 00:39:17.481:          Attribute 6 6 00000002
Jun 19 00:39:17.481:          Attribute 7 6 00000001
Jun 19 00:39:17.481:          Attribute 26 20 00000009FA0E4754
Jun 19 00:39:17.481:          Attribute 26 18 00000009FA0C4742
Jun 19 00:39:17.481: RADIUS: saved authorization data for user 61E73934 at
61E72A58
Jun 19 00:39:17.481: SSG-CTL-EVN: Creating HostObject for host
212.93.193.114.
Jun 19 00:39:17.489: SSG-CTL-EVN: Set Host Mac Address .
Jun 19 00:39:17.489: SSG-CTL-EVN: ** attr->type = 6
Jun 19 00:39:17.489: SSG-CTL-EVN: ATTR_LOOP = 1
Jun 19 00:39:17.489: SSG-CTL-EVN: ** attr->type = 7
Jun 19 00:39:17.493: SSG-CTL-EVN: ATTR_LOOP = 2
Jun 19 00:39:17.493: SSG-CTL-EVN: ATTR_LOOP = 3
Jun 19 00:39:17.493: SSG-CTL-EVN: ATTR_LOOP = 4
Jun 19 00:39:17.493: SSG-CTL-EVN: Account logon is accepted
(212.93.193.114,hisham).


arielle_nrp3# show ssg host 212.93.193.114
----------------------- HostObject Content ----------------------
Activated: TRUE
Interface: Virtual-Access3
User Name: hisham
Host IP: 212.93.193.114
Msg IP: 10.200.56.40 (9902)
Host DNS IP: 0.0.0.0
Maximum Session Timeout: 0 seconds
Host Idle Timeout: 0 seconds
Class Attr: NONE
User logged on since: 01:54:33.000 UTC Tue Jun 19 2001
User last activity at: 01:54:33.000 UTC Tue Jun 19 2001
Default Service: NONE
DNS Default Service: NONE
Active Services: NONE
```

AutoService: NONE Subscribed Services: The following output
also results from the debug commands that are turned on before the SSD logon. Jun 19
02:06:39.529: SSG-DATA:CEF-FIB_FLAG_RECEIVE=1(Vi3:212.93.193.114->10.200.56.6) Jun 19
02:06:40.789: SSG-DATA:CEF-MulticastDest=1(AT0/0/0.61:14.14.14.5->224.0.0.10) Jun 19
02:06:41.581: SSG-DATA:CEF-FIB_FLAG_RECEIVE=1(Vi3:212.93.193.114->10.200.56.6) Jun 19
02:06:42.509: SSG-DATA:CEF-FIB_FLAG_RECEIVE=1(Vi3:212.93.193.114->10.200.56.6) Jun 19
02:06:43.313: SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40) Jun 19
02:06:43.313: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0) Jun 19 02:06:43.349: SSG-
DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40) Jun 19 02:06:43.353:
arielle_nrp3# **show ssg host 212.93.193.114**
---------------------- HostObject Content ----------------------
Activated: TRUE
Interface: Virtual-Access3
User Name: hisham
Host IP: 212.93.193.114
Msg IP: 10.200.56.40 (9902)
!--- Message server IP & port adddress, and TCP port used. !--- This is configured in the
dashboard.conf file. Host DNS IP: 0.0.0.0 Maximum Session Timeout: 0 seconds Host Idle Timeout:
0 seconds Class Attr: NONE User logged on since: 01:54:33.000 UTC Tue Jun 19 2001 User last
activity at: 01:54:33.000 UTC Tue Jun 19 2001 Default Service: NONE DNS Default Service: NONE
Active Services: NONE AutoService: NONE Subscribed Services: arielle_nrp3#

此时用户尚未登录任何服务。该客户首先在SSD网页的服务列表中看到中东、开罗，然后是埃及资
本。客户端点击Egentian Capital后，用户名和密码字段将显示在页面上。尚未将任何有效服务关联
到客户端。客户端为访问cairo.com服务提供的用户名和密码必须与L2TP网络服务器(LNS)配置的用
户名和密码匹配。 在此设置中，LNS在本地对用户进行身份验证。用户名为ayman@cairo.com，密
码为ayman。

(LAC) L2TP 接入集中器输出

arielle_nrp3# **show debugging**
SSG:
SSG data path packets debugging is on
SSG control path events debugging is on
SSG control path packets debugging is on
SSG packets debugging is on
VPN:
L2X protocol events debugging is on
L2X data packets debugging is on
L2X control packets debugging is on
L2TP data sequencing debugging is on
Radius protocol debugging is on

Jun 19 02:34:48.121:
SSG-DATA:CEF-FIB_FLAG_RECEIVE=1(Vi3:212.93.193.114->10.200.56.6)
Jun 19 02:34:48.157:
SSG-DATA:CEF-FIB_FLAG_RECEIVE=1(Vi3:212.93.193.114->10.200.56.6)
Jun 19 02:34:49.681:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 19 02:34:49.685: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 19 02:34:49.717:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 19 02:34:49.725:
SSG-DATA:CEF-UP-DefaultNetwork=1(Vi3:212.93.193.114->10.200.56.40)
Jun 19 02:34:49.725: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 19 02:34:49.777: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 19 02:34:49.777: SSG-CTL-PAK: Received Packet:
sIP=10.200.56.40 sPort=37638 dIP=10.200.56.6 dPort=1645
Jun 19 02:34:49.777:   header: code=1, id=19, len=102,
auth=3F53BB3F2939DAA1E5D9435792491CD3
Jun 19 02:34:49.777:   attr: type=1, len=17, val=ayman@cairo.com

```
Jun 19 02:34:49.777:     attr: type=2, len=18, val=(89)(C4)/}(BB)(8F)
Jun 19 02:34:49.777:     attr: type=6, len=6, val=(00)(00)(00)(02)
Jun 19 02:34:49.777:     attr: type=26, len=23,

Jun 19 02:34:49.777: SSG-CTL-EVN: Downloading service profile for service
cairo.com.
Jun 19 02:34:49.777: RADIUS: ustruct sharecount=1
Jun 19 02:34:49.777: RADIUS: Initial Transmit  id 73 10.200.56.16:1645,
Access-Request, len 67
Jun 19 02:34:49.777:          Attribute 4 6 D45DC301
Jun 19 02:34:49.777:          Attribute 61 6 00000000
Jun 19 02:34:49.777:          Attribute 1 11 63616972
Jun 19 02:34:49.777:          Attribute 2 18 51CF64B7
Jun 19 02:34:49.777:          Attribute 6 6 00000005
Jun 19 02:34:49.785: SSG-DATA:CEF-SSGSubBlock=0(Fa0/0/0:0.0.0.0->0.0.0.0)
Jun 19 02:34:49.785: RADIUS: Received from id 73 10.200.56.16:1645,
Access-Accept, len 275
Jun 19 02:34:49.785:          Attribute 6 6 00000005
Jun 19 02:34:49.785:          Attribute 26 27 0000000901157670
Jun 19 02:34:49.785:          Attribute 26 40 0000000901227670
Jun 19 02:34:49.785:          Attribute 26 30 0000000901187670
Jun 19 02:34:49.785:          Attribute 26 37 00000009011F7670

Jun 19 02:34:49.789: SSG-CTL-EVN: ##### ssg_l2tp_disc_cause: termCause=1026
Jun 19 02:34:49.789: SSG-CTL-EVN: ssg_l2tp_disc_routine:
Jun 19 02:34:49.801: SSG-CTL-EVN: Checking service mode.
Jun 19 02:34:49.801: SSG-CTL-EVN: ServiceLogon: Enqueue request of service
cairo.com


arielle_nrp3# show ssg host 212.93.193.114
---------------------- HostObject Content ----------------------
Activated: TRUE
Interface: Virtual-Access3
User Name: hisham
Host IP: 212.93.193.114
Msg IP: 10.200.56.40 (9902)
Host DNS IP: 0.0.0.0
Maximum Session Timeout: 0 seconds
Host Idle Timeout: 0 seconds
Class Attr: NONE
User logged on since: 01:54:33.000 UTC Tue Jun 19 2001
User last activity at: 02:34:49.000 UTC Tue Jun 19 2001
Default Service: NONE
DNS Default Service: NONE
Active Services: cairo.com
```
!--- A service is active. AutoService: NONE Subscribed Services: arielle_nrp3# **show ssg service**
cairo.com
```
---------------------- ServiceInfo Content ----------------------
Uplink IDB:
Name: cairo.com
Type: TUNNEL
Mode: CONCURRENT
Service Session Timeout: 0 seconds
Service Idle Timeout: 0 seconds
Authentication Type: CHAP
Next Hop Gateway Key: cairo.com_key
DNS Server(s):
TunnelId: nap
TunnelPassword: CAIRO
HomeGateway Addresses: 15.15.15.5
Included Network Segments:
15.15.15.4/255.255.255.252
Excluded Network Segments:
```

```
ConnectionCount 1
Full User Name not used
Domain List: cairo.com;
Active Connections:
1    : RealIP=212.93.197.114, Subscriber=212.93.193.114
----------------------- End of ServiceInfo Content ----------------
```

在上述输出中，RealIP是服务网络为用户hisham提供的IP地址。用户字段显示SSG NRP接入网络为用户提供的IP地址。

```
arielle_nrp3# show ssg connection 212.93.193.114 cairo.com
----------------------- ConnectionObject Content ----------------------
User Name: ayman@cairo.com Owner
Host: 212.93.193.114 Associated Service: cairo.com Connection State: 0 (UP) Connection
Started since: 02:34:51.000 UTC Tue Jun 19 2001 User last activity at: 02:34:51.000
UTC Tue Jun 19 2001 Connection Real IP: 212.93.197.114 L2TP VIDB: Virtual-Access4
L2TP Session Key: 0 Connection Traffic Statistics: Input Bytes = 0 (HI = 0), Input
packets = 0 Output Bytes = 0 (HI = 0), Output packets = 0
```

LNS 输出

```
ior# show debugging VPN
L2X protocol events debugging is on
L2X data packets debugging is on
L2X control packets debugging is on
L2TP data sequencing debugging is on

*Jun 18 19:27:09.851 PDT: L2X: Parse  AVP 0, len 8, flag 0x8000 (M)
*Jun 18 19:27:09.851 PDT: L2X: Parse SCCRQ
*Jun 18 19:27:09.851 PDT: L2X: Parse  AVP 2, len 8, flag 0x8000 (M)
*Jun 18 19:27:09.851 PDT: L2X: Protocol Ver 256
*Jun 18 19:27:09.851 PDT: L2X: Parse  AVP 3, len 10, flag 0x8000 (M)
*Jun 18 19:27:09.851 PDT: L2X: Framing Cap 0x0
*Jun 18 19:27:09.851 PDT: L2X: Parse  AVP 4, len 10, flag 0x8000 (M)
*Jun 18 19:27:09.851 PDT: L2X: Bearer Cap 0x0
*Jun 18 19:27:09.855 PDT: L2X: Parse  AVP 6, len 8, flag 0x0

*Jun 18 19:27:09.855 PDT: L2X: I SCCRQ, flg TLS, ver 2, len 128, tnl 0, cl 0, ns 0, nr 0
C8 02 00 80 00 00 00 00 00 00 00 00 80 08 00 00
00 00 00 01 80 08 00 00 00 02 01 00 80 0A 00 00
00 03 00 00 00 00 80 0A 00 00 00 04 00 00 00 ...
*Jun 18 19:27:09.855 PDT: L2TP: I SCCRQ from nap tnl 13552
*Jun 18 19:27:09.855 PDT: Tnl 4818 L2TP: Got a challenge in SCCRQ, nap
*Jun 18 19:27:09.855 PDT: Tnl 4818 L2TP: New tunnel created for remote nap,
```

相关信息

- 思科DSL技术支持
- 技术支持和文档 - Cisco Systems