

# Configuración de AnyConnect Secure Mobility Client con una contraseña para un solo uso

## Contenido

[Introducción](#)

[Prerequisites](#)

[Requirements](#)

[Componentes Utilizados](#)

[Antecedentes](#)

[Flujo de paquetes](#)

[Configurar](#)

[Diagrama de la red](#)

[Verificación](#)

[Experiencia de usuario](#)

[Troubleshoot](#)

[Leyenda](#)

[Información Relacionada](#)

## Introducción

Este documento describe un ejemplo de configuración para el acceso de Cisco AnyConnect Secure Mobility Client del dispositivo de seguridad adaptable (ASA).

## Prerequisites

### Requirements

Este documento asume que ASA está completamente operativo y configurado para permitir que el Cisco Adaptive Security Device Manager (ASDM) o la Interfaz de línea de comandos (CLI) realicen cambios en la configuración.

Cisco recomienda que tenga conocimiento sobre estos temas:

- Conocimiento básico de CLI y ASDM de ASA
- Configuración de SSLVPN en el terminal principal de Cisco ASA
- Conocimiento básico de Autenticación de dos factores

## Componentes Utilizados

La información de este documento se basa en las siguientes versiones de software y hardware:

- Dispositivo de seguridad adaptable ASA5506 de Cisco
- Software Adaptive Security Appliance de Cisco versión 9.6(1)
- Adaptive Security Device Manager versión 7.8(2)
- AnyConnect versión 4.5.02033

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Nota: descargue el paquete AnyConnect VPN Client (anyconnect-win\*.pkg) desde Cisco [Software Download](#) (sólo para clientes registrados). Copie el cliente VPN AnyConnect en la memoria flash del ASA, que se descarga en los equipos de los usuarios remotos para establecer la conexión VPN SSL con el ASA. Consulte la sección Instalación de AnyConnect Client de la guía de configuración ASA para obtener más información.

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La información que contiene este documento se creó a partir de los dispositivos en un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si tiene una red en vivo, asegúrese de entender el posible impacto de cualquier comando.

## Antecedentes

Adaptive Security Appliance (ASA) El acceso a Cisco AnyConnect Secure Mobility Client utiliza autenticación de dos factores con la ayuda de la contraseña para un solo uso (OTP). Se deben proporcionar las credenciales y el token correctos para que un usuario de AnyConnect se conecte correctamente.

La autenticación de dos factores utiliza dos métodos de autenticación diferentes que pueden ser cualquiera de estos 2.

- Algo que usted sabe
- Algo que tienes
- Algo que eres

En general, comprende algo que un usuario conoce (nombre de usuario y contraseña), y algo que un usuario tiene (por ejemplo, una entidad de información que solo un individuo posee como un token o certificado). Esto es más seguro que los diseños de autenticación tradicionales en los que un usuario autentica a través de credenciales almacenadas en la base de datos local de ASA o en el servidor de Active Directory (AD) integrado con ASA. La contraseña de un solo uso es una de las formas más sencillas y populares de autenticación de dos factores para proteger el acceso a la red. Por ejemplo, en las grandes empresas, el acceso a la red privada virtual a menudo requiere el uso de tokens de contraseña de un solo uso para la autenticación de usuarios remotos.

En esta situación, se utiliza el servidor de autenticación OpenOTP como servidor AAA que utiliza el protocolo radius para la comunicación entre ASA y el servidor AAA. Las credenciales de usuario se configuran en el servidor OpenOTP, que está asociado con el servicio de la aplicación Google Authenticator como un token de software para la autenticación de dos factores.

La configuración de OpenOTP no se trata aquí porque está fuera del alcance de este documento. Puede consultar estos enlaces para obtener más información.

## Configuración de OpenOTP

[https://www.rcdevs.com/docs/howtos/openotp\\_quick\\_start/openotp\\_quick\\_start/](https://www.rcdevs.com/docs/howtos/openotp_quick_start/openotp_quick_start/)

## Configuración de ASA para la autenticación OpenOTP

[https://www.rcdevs.com/docs/howtos/asa\\_ssl\\_vpn/asa/](https://www.rcdevs.com/docs/howtos/asa_ssl_vpn/asa/)

## Flujo de paquetes

Esta captura de paquetes fue tomada en la interfaz externa de ASA conectada al servidor AAA en 10.106.50.20.

1. El usuario de AnyConnect inicia la conexión del cliente hacia ASA y depende del group-url y del group-alias configurados, la conexión aterriza en un grupo de túnel específico (perfil de conexión). En este momento, se le solicita al usuario que introduzca las credenciales.
2. Una vez que el usuario ingresa las credenciales, la solicitud de autenticación (paquete Access-Request) se reenvía al servidor AAA desde el ASA.

No.	Time	Source	Destination	Protocol	Length	Port	Service
923	2017-10-21 08:20:07.184621	10.106.48.191	10.106.50.20	RADIUS	222		UDP
924	2017-10-21 08:20:07.264100	10.106.50.20	10.106.48.191	RADIUS	122		UDP
947	2017-10-21 08:20:13.996393	10.106.48.191	10.106.50.20	RADIUS	240		UDP
948	2017-10-21 08:20:14.065258	10.106.50.20	10.106.48.191	RADIUS	86		UDP

Frame 923: 222 bytes on wire (1776 bits), 222 bytes captured (1776 bits)

- Ethernet II, Src: CiscoInc\_f0:3e:e2 (54:75:d0:f0:3e:e2), Dst: CiscoInc\_3c:96:7f (00:23:5e:3c:96:7f)
- Internet Protocol Version 4, Src: 10.106.48.191, Dst: 10.106.50.20
- User Datagram Protocol, Src Port: 13512 (13512), Dst Port: 1645 (1645)
- RADIUS Protocol
  - Code: Access-Request (1)
  - Packet identifier: 0x9 (9)
  - Length: 180
  - Authenticator: 8be6bdba618e4fe0be854cdc65d1522c
  - [The response to this request is in frame 924]
  - Attribute Value Pairs
    - AVP: 1=7 t=User-Name(1): cisco
      - User-Name: cisco
    - AVP: 1=18 t=User-Password(2): Encrypted
      - User-Password (encrypted): 6e315c38e33f3832226b3f37944127a0

3. Una vez que la solicitud de autenticación llega al servidor AAA, valida las credenciales. Si son correctos, el servidor AAA responde con un Access-Challenge donde se le pide al usuario que ingrese una contraseña de un solo uso. En caso de credenciales incorrectas, se envía un paquete Access-Reject al ASA.

923	2017-10-21 08:20:07.184621	10.106.48.191	10.106.50.20	RADIUS	222	UDP	Access-Request(1) (id=9, l=180)
924	2017-10-21 08:20:07.264100	10.106.50.20	10.106.48.191	RADIUS	122	UDP	Access-Challenge(11) (id=9, l=80)
947	2017-10-21 08:20:13.996393	10.106.48.191	10.106.50.20	RADIUS	240	UDP	Access-Request(1) (id=10, l=198)
948	2017-10-21 08:20:14.065258	10.106.50.20	10.106.48.191	RADIUS	86	UDP	Access-Accept(2) (id=10, l=44)

```

Frame 924: 122 bytes on wire (976 bits), 122 bytes captured (976 bits)
Ethernet II, Src: CiscoInc_3c:96:7f (00:23:5e:3c:96:7f), Dst: CiscoInc_f0:3e:e2 (54:75:d0:f0:3e:e2)
Internet Protocol Version 4, Src: 10.106.50.20, Dst: 10.106.48.191
User Datagram Protocol, Src Port: 1645 (1645), Dst Port: 13512 (13512)
RADIUS Protocol
Code: Access-Challenge (11)
Packet identifier: 0x9 (9)
Length: 80
Authenticator: 291ef37118c398ae35187b27252dcc74
[This is a response to a request in frame 923]
[Time from request: 0.079479000 seconds]
Attribute Value Pairs
AVP: l=18 t=State(24): 6a6557357a6d625a6749326531664134
AVP: l=36 t=Reply-Message(18): Enter your TOKEN one-time password
Reply-Message: Enter your TOKEN one-time password
AVP: l=6 t=Session-Timeout(27): 90

```

4. Cuando el usuario ingresa la contraseña de un solo uso, la solicitud de autenticación en forma de paquete Access-Request se envía desde el ASA al servidor AAA

923	2017-10-21 08:20:07.184621	10.106.48.191	10.106.50.20	RADIUS	222	UDP	Access-Request(1) (id=9, l=180)
924	2017-10-21 08:20:07.264100	10.106.50.20	10.106.48.191	RADIUS	122	UDP	Access-Challenge(11) (id=9, l=80)
947	2017-10-21 08:20:13.996393	10.106.48.191	10.106.50.20	RADIUS	240	UDP	Access-Request(1) (id=10, l=198)
948	2017-10-21 08:20:14.065258	10.106.50.20	10.106.48.191	RADIUS	86	UDP	Access-Accept(2) (id=10, l=44)

```

Frame 947: 240 bytes on wire (1920 bits), 240 bytes captured (1920 bits)
Ethernet II, Src: CiscoInc_f0:3e:e2 (54:75:d0:f0:3e:e2), Dst: CiscoInc_3c:96:7f (00:23:5e:3c:96:7f)
Internet Protocol Version 4, Src: 10.106.48.191, Dst: 10.106.50.20
User Datagram Protocol, Src Port: 13512 (13512), Dst Port: 1645 (1645)
RADIUS Protocol
Code: Access-Request (1)
Packet identifier: 0xa (10)
Length: 198
Authenticator: 8be6bdba618e4fe0be854cdc65d1522c
[The response to this request is in frame 948]
Attribute Value Pairs
AVP: l=7 t=User-Name(1): cisco
User-Name: cisco
AVP: l=18 t=User-Password(2): Encrypted
User-Password (encrypted): 3b6f1e69bd063832226b3f37944127a0

```

5. Una vez que la contraseña de un solo uso se valida correctamente en el servidor AAA, se envía un paquete de aceptación de acceso del servidor al ASA, el usuario se autentica correctamente y esto completa el proceso de autenticación de dos factores.

923	2017-10-21 08:20:07.184621	10.106.48.191	10.106.50.20	RADIUS	222	UDP	Access-Request(1) (id=9, l=180)
924	2017-10-21 08:20:07.264100	10.106.50.20	10.106.48.191	RADIUS	122	UDP	Access-Challenge(11) (id=9, l=80)
947	2017-10-21 08:20:13.996393	10.106.48.191	10.106.50.20	RADIUS	240	UDP	Access-Request(1) (id=10, l=198)
948	2017-10-21 08:20:14.065258	10.106.50.20	10.106.48.191	RADIUS	86	UDP	Access-Accept(2) (id=10, l=44)

```

Frame 948: 86 bytes on wire (688 bits), 86 bytes captured (688 bits)
Ethernet II, Src: CiscoInc_3c:96:7f (00:23:5e:3c:96:7f), Dst: CiscoInc_f0:3e:e2 (54:75:d0:f0:3e:e2)
Internet Protocol Version 4, Src: 10.106.50.20, Dst: 10.106.48.191
User Datagram Protocol, Src Port: 1645 (1645), Dst Port: 13512 (13512)
RADIUS Protocol
Code: Access-Accept (2)
Packet identifier: 0xa (10)
Length: 44
Authenticator: d86b54ccaf531e9efc116cfb11d91d75
[This is a response to a request in frame 947]
[Time from request: 0.068865000 seconds]
Attribute Value Pairs
AVP: l=24 t=Reply-Message(18): Authentication success
Reply-Message: Authentication success

```

## Información sobre la licencia de AnyConnect

Estos son algunos enlaces a información útil sobre las licencias de Cisco AnyConnect Secure Mobility Client:

- Consulte [este documento](#) para ver las preguntas frecuentes sobre licencias de AnyConnect.
- Consulte la Guía de pedidos de Cisco AnyConnect para obtener información sobre las licencias de AnyConnect Apex y Plus.

## Configurar

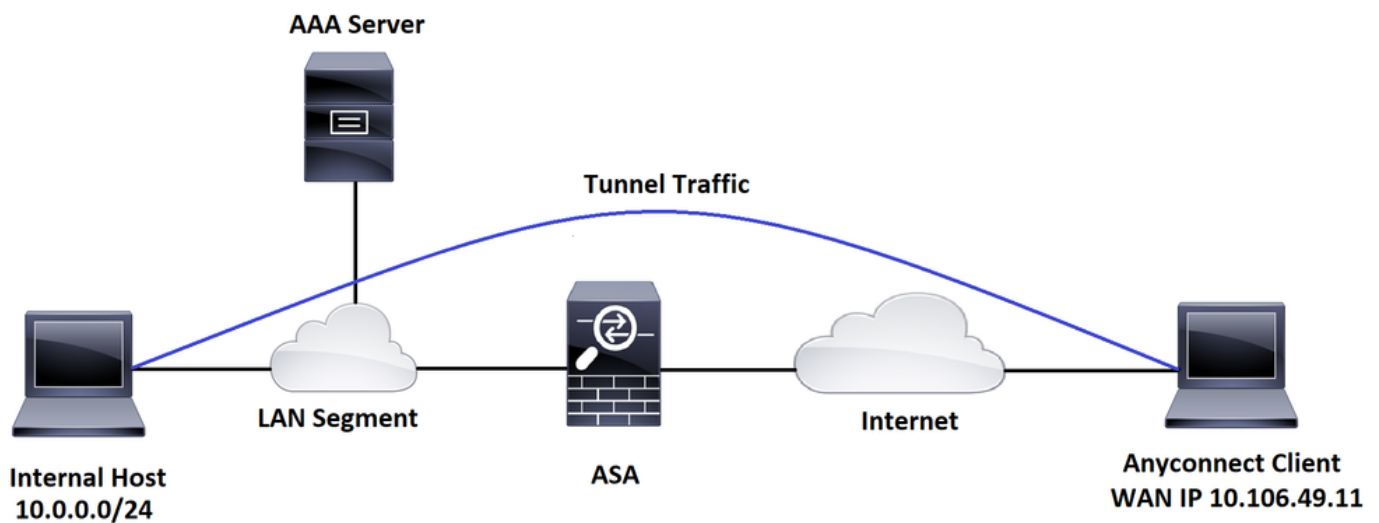
En esta sección se describe cómo configurar Cisco AnyConnect Secure Mobility Client en ASA.

---

Nota: Use el Command Lookup Tool (únicamente clientes registrados) para obtener más información sobre los comandos que se utilizan en esta sección.

---

### Diagrama de la red



### Asistente de configuración de ASDM de AnyConnect

El asistente de configuración de AnyConnect se puede utilizar para configurar AnyConnect Secure Mobility Client. Asegúrese de que se haya cargado un paquete de AnyConnect Client en la memoria flash o el disco del firewall de ASA antes de continuar.

Complete estos pasos para configurar AnyConnect Secure Mobility Client mediante el asistente de configuración:

Para la configuración de túnel dividido mediante ASDM, para descargar e instalar AnyConnect,

consulte este documento.

## [AnyConnect Secure Mobility Client](#)

### Configuración CLI ASA

En esta sección se proporciona la configuración de la CLI para Cisco AnyConnect Secure Mobility Client con fines de referencia.

```
!-----Client pool configuration-----
```

```
ip local pool ANYCONNECT-POOL 192.168.100.1-192.168.100.254 mask 255.255.255.0
```

```
!
```

```
interface GigabitEthernet1/1
```

```
 nameif outside
```

```
 security-level 0
```

```
 ip address dhcp setroute
```

```
!
```

```
!-----Split ACL configuration-----
```

```
access-list SPLIT-TUNNEL standard permit 10.0.0.0 255.255.255.0
```

```
pager lines 24
```

```
logging enable
```

```
logging timestamp
```

```
mtu tftp 1500
```

```
mtu outside 1500
```

```
icmp unreachable rate-limit 1 burst-size 1
```

```
icmp permit any outside
```

```
asdm image disk0:/asdm-782.bin
```

```
no asdm history enable
```

```
arp timeout 14400
```

```
no arp permit-nonconnected
```

```
route outside 0.0.0.0 0.0.0.0 10.106.56.1 1
```

```
!-----Configure AAA server -----
```

```
aaa-server RADIUS_OTP protocol radius
```

```
aaa-server RADIUS_OTP (outside) host 10.106.50.20
```

```
key *****
```

```
!-----Configure Trustpoint containing ASA Identity Certificate -----
```

```
crypto ca trustpoint ASDM_Trustpoint 0
```

```
enrollment self
```

```
subject-name CN=bg1anyconnect.cisco.com
```

```
keypair self
```

```
!-----Apply trustpoint on outside interface-----
```

```
ssl trust-point ASDM_Trustpoint0 outside
```

```
!-----Enable AnyConnect and configuring AnyConnect Image-----
```

```
webvpn
```

```
enable outside
```

```
anyconnect image disk0:/anyconnect-win-4.5.02033-webdeploy-k9.pkg 1
```

```
anyconnect enable
```

```
tunnel-group-list enable
```

!-----Group Policy configuration-----

```
group-policy GroupPolicy_ANYCONNECT-PROFILE internal
group-policy GroupPolicy_ANYCONNECT-PROFILE attributes
  dns-server value 10.10.10.99
  vpn-tunnel-protocol ssl-client
    split-tunnel-policy tunnelspecified
  split-tunnel-network-list value SPLIT-TUNNEL
  default-domain value cisco.com
```

!-----Tunnel-Group (Connection Profile) Configuration-----

```
tunnel-group ANYCONNECT_PROFILE type remote-access
tunnel-group ANYCONNECT_PROFILE general-attributes
  address-pool ANYCONNECT-POOL
  authentication-server-group RADIUS_OTP
  default-group-policy GroupPolicy_ANYCONNECT-PROFILE
tunnel-group ANYCONNECT_PROFILE webvpn-attributes
  group-alias ANYCONNECT-PROFILE enable

: end
```

Para configurar e instalar un certificado de terceros en el ASA para conexiones de cliente AnyConnect, consulte este documento.

[Configuración del certificado digital SSL de ASA](#)

## Verificación

Utilice esta sección para confirmar que su configuración funcione correctamente.

---

Nota: la [herramienta Output Interpreter Tool](#) (sólo clientes [registrados](#)) admite ciertos comandos show. Utilice la herramienta para ver una análisis de información de salida del comando show.

---



Estos comandos show se pueden ejecutar para confirmar el estado del cliente AnyConnect y sus estadísticas.

```
ASA(config)# show vpn-sessiondb anyconnect
```

Session Type: AnyConnect

```
Username      : cisco                Index      : 1
Assigned IP   : 192.168.100.1         Public IP  : 10.106.49.111
Protocol      : AnyConnect-Parent DTLS-Tunnel
License       : AnyConnect Premium
Encryption    : AnyConnect-Parent: (1)none DTLS-Tunnel: (1)AES256
Hashing       : AnyConnect-Parent: (1)none DTLS-Tunnel: (1)SHA1
Bytes Tx      : 15122                 Bytes Rx   : 5897
Group Policy  : GroupPolicy_ANYCONNECT-PROFILE
Tunnel Group  : ANYCONNECT_PROFILE
Login Time    : 14:47:09 UTC Wed Nov 1 2017
Duration      : 1h:04m:52s
Inactivity    : 0h:00m:00s
VLAN Mapping  : N/A                   VLAN       : none
Audt Sess ID  : 000000000000100059f9de6d
Security Grp  : none
```

```
ASA(config)# show vpn-sessiondb detail anyconnect filter name cisco
```

Session Type: AnyConnect Detailed

```
Username      : cisco                Index      : 1
Assigned IP   : 192.168.100.1         Public IP  : 10.106.49.111
Protocol      : AnyConnect-Parent DTLS-Tunnel
License       : AnyConnect Premium
```

Encryption : AnyConnect-Parent: (1)none DTLS-Tunnel: (1)AES256  
Hashing : AnyConnect-Parent: (1)none DTLS-Tunnel: (1)SHA1  
Bytes Tx : 15122 Bytes Rx : 5897  
Pkts Tx : 10 Pkts Rx : 90  
Pkts Tx Drop : 0 Pkts Rx Drop : 0  
Group Policy : GroupPolicy\_ANYCONNECT-PROFILE  
Tunnel Group : ANYCONNECT\_PROFILE  
Login Time : 14:47:09 UTC Wed Nov 1 2017  
Duration : 1h:04m:55s  
Inactivity : 0h:00m:00s  
VLAN Mapping : N/A VLAN : none  
Audt Sess ID : 000000000000100059f9de6d  
Security Grp : none

AnyConnect-Parent Tunnels: 1

DTLS-Tunnel Tunnels: 1

AnyConnect-Parent:

Tunnel ID : 1.1  
Public IP : 10.106.49.111  
Encryption : none Hashing : none  
TCP Src Port : 53113 TCP Dst Port : 443  
Auth Mode : userPassword  
Idle Time Out: 30 Minutes Idle TO Left : 1 Minutes  
Client OS : win  
Client OS Ver: 6.1.7601 Service Pack 1  
Client Type : AnyConnect  
Client Ver : Cisco AnyConnect VPN Agent for Windows 4.5.02033  
Bytes Tx : 7561 Bytes Rx : 0  
Pkts Tx : 5 Pkts Rx : 0  
Pkts Tx Drop : 0 Pkts Rx Drop : 0

DTLS-Tunnel:

Tunnel ID : 1.3  
Assigned IP : 192.168.100.1                      Public IP : 10.106.49.111  
Encryption : AES256                              Hashing : SHA1  
Ciphersuite : AES256-SHA  
Encapsulation: DTLSv1.0                          UDP Src Port : 63257  
UDP Dst Port : 443                                Auth Mode : userPassword  
Idle Time Out: 30 Minutes                        Idle TO Left : 0 Minutes  
Client OS : Windows  
Client Type : DTLS VPN Client  
Client Ver : Cisco AnyConnect VPN Agent for Windows 4.5.02033  
Bytes Tx : 0                                        Bytes Rx : 5801  
Pkts Tx : 0                                        Pkts Rx : 88  
Pkts Tx Drop : 0                                  Pkts Rx Drop : 0

## Experiencia de usuario

the 1990s, the number of people in the UK who are aged 65 and over has increased from 10.5 million to 13.5 million, and the number of people aged 75 and over has increased from 4.5 million to 6.5 million (Office for National Statistics 2000). The number of people aged 85 and over has increased from 1.5 million to 2.5 million.

There is a growing awareness of the need to address the needs of the elderly population, and the need to ensure that they are able to live independently and safely in their own homes. This has led to a number of initiatives, including the development of home care services, the provision of home care packages, and the development of home care agencies. The aim of this paper is to review the current state of home care services in the UK, and to discuss the challenges facing the sector.

The paper is structured as follows. Section 2 discusses the current state of home care services in the UK. Section 3 discusses the challenges facing the sector. Section 4 discusses the need for a new approach to home care services. Section 5 discusses the development of a new approach to home care services. Section 6 discusses the implications of the new approach. Section 7 discusses the conclusions of the paper.

## 2. Current state

The current state of home care services in the UK is characterized by a number of key features. These are discussed in this section.

The first key feature is the increasing demand for home care services. This is due to the increasing number of people aged 65 and over, and the increasing number of people aged 75 and over.

The second key feature is the increasing diversity of home care services. This is due to the increasing number of people with different needs, and the increasing number of people who are unable to live independently in their own homes.

The third key feature is the increasing competition between home care providers. This is due to the increasing number of home care providers, and the increasing number of people who are able to choose between different providers.

The fourth key feature is the increasing pressure on home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The fifth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The sixth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The seventh key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The eighth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The ninth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The tenth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The eleventh key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The twelfth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The thirteenth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The fourteenth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The fifteenth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The sixteenth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The seventeenth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The eighteenth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The nineteenth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

The twentieth key feature is the increasing need for home care services. This is due to the increasing number of people who are unable to live independently in their own homes, and the increasing number of people who are unable to pay for home care services.

---

: En ASA, puede establecer varios niveles de depuración; de forma predeterminada, se utiliza el nivel 1. Si cambia el nivel de depuración, puede aumentar el nivel de detalle de los depuradores. Hágalo con precaución, especialmente en entornos de producción.

---

Para resolver problemas del proceso de autenticación completo para una conexión de cliente AnyConnect entrante, puede utilizar estos debugs:

- debug radius all
- debug aaa authentication
- debug wrbvpn anyconnect

Estos comandos confirman que las credenciales del usuario son correctas o no.

```
test aaa-server authentication <aaa_server_group> [<host_ip>] username <user> password <password>
```

En caso de que el nombre de usuario y la contraseña sean correctos,

```
ASA(config)# test aaa authentication RADIUS_OTP host 10.106.50.20
Username: cisco
Password: *****
INFO: Attempting Authentication test to IP address <10.106.50.20> (timeout: 12 seconds)
ERROR: Authentication Challenged: No error
```

El último error se relaciona con el hecho de que dado que el servidor AAA espera que el usuario ingrese una contraseña de una sola vez luego de la autenticación exitosa del nombre de usuario y la contraseña, y esta prueba no involucra a un usuario que ingresa activamente a OTP, usted ve el Access-Challenge enviado por el servidor AAA en respuesta al cual no se ve ningún error en el ASA.

En caso de que el nombre de usuario o la contraseña sean incorrectos,

```
ASA(config)# test aaa authentication RADIUS_OTP host 10.106.50.20
Username: cisco
Password: ***
INFO: Attempting Authentication test to IP address <10.106.50.20> (timeout: 12 seconds)
ERROR: Authentication Rejected: AAA failure
```

Las depuraciones de una configuración de trabajo tienen este aspecto:

## Leyenda

IP real del cliente AnyConnect: 10.106.49.111

IP de ASA: 10.106.48.191

```
ASA(config)# debug radius all
ASA(config)# debug aaa authentication
debug aaa authentication enabled at level 1
radius mkreq: 0x8
alloc_rip 0x74251058
    new request 0x8 --> 7 (0x74251058)
got user 'cisco'
got password
add_req 0x74251058 session 0x8 id 7
RADIUS_REQUEST
radius.c: rad_mkpkt
rad_mkpkt: ip:source-ip=10.106.49.111
```

RADIUS packet decode (authentication request)

-----

Raw packet data (length = 180).....

```
01 07 00 b4 b6 c2 bf 25 cf 80 53 a9 a2 3d c8 ca | .....%..S..=..
74 05 27 5c 01 07 63 69 73 63 6f 02 12 d7 99 45 | t.'\..cisco....E
6e 0f 46 71 bc 52 47 b0 81 b4 18 ae 34 05 06 00 | n.Fq.RG.....4...
00 40 00 1e 0f 31 30 2e 31 30 36 2e 34 38 2e 31 | .@...10.106.48.1
39 31 1f 0f 31 30 2e 31 30 36 2e 34 39 2e 31 31 | 91..10.106.49.11
31 3d 06 00 00 00 05 42 0f 31 30 2e 31 30 36 2e | 1=.....B.10.106.
34 39 2e 31 31 31 04 06 0a 6a 30 bf 1a 22 00 00 | 49.111...j0..."..
```

```
00 09 01 1c 69 70 3a 73 6f 75 72 63 65 2d 69 70 | ....ip:source-ip
3d 31 30 2e 31 30 36 2e 34 39 2e 31 31 31 1a 1a | =10.106.49.111..
00 00 0c 04 92 14 41 4e 59 43 4f 4e 4e 45 43 54 | .....ANYCONNECT
2d 50 52 4f 46 49 4c 45 1a 0c 00 00 0c 04 96 06 | -PROFILE.....
00 00 00 02 | ....
```

Parsed packet data.....

Radius: Code = 1 (0x01)

Radius: Identifier = 7 (0x07)

Radius: Length = 180 (0x00B4)

Radius: Vector: B6C2BF25CF8053A9A23DC8CA7405275C

Radius: Type = 1 (0x01) User-Name

Radius: Length = 7 (0x07)

Radius: Value (String) =

```
63 69 73 63 6f | cisco
```

Radius: Type = 2 (0x02) User-Password

Radius: Length = 18 (0x12)

Radius: Value (String) =

```
d7 99 45 6e 0f 46 71 bc 52 47 b0 81 b4 18 ae 34 | ..En.Fq.RG.....4
```

Radius: Type = 5 (0x05) NAS-Port

Radius: Length = 6 (0x06)

Radius: Value (Hex) = 0x4000

Radius: Type = 30 (0x1E) Called-Station-Id

Radius: Length = 15 (0x0F)

Radius: Value (String) =

```
31 30 2e 31 30 36 2e 34 38 2e 31 39 31 | 10.106.48.191
```

Radius: Type = 31 (0x1F) Calling-Station-Id

Radius: Length = 15 (0x0F)

Radius: Value (String) =

```
31 30 2e 31 30 36 2e 34 39 2e 31 31 31 | 10.106.49.111
```

Radius: Type = 61 (0x3D) NAS-Port-Type

Radius: Length = 6 (0x06)

Radius: Value (Hex) = 0x5

Radius: Type = 66 (0x42) Tunnel-Client-Endpoint

Radius: Length = 15 (0x0F)

Radius: Value (String) =

31 30 2e 31 30 36 2e 34 39 2e 31 31 31 | 10.106.49.111

Radius: Type = 4 (0x04) NAS-IP-Address

Radius: Length = 6 (0x06)

Radius: Value (IP Address) = 10.106.48.191 (0x0A6A30BF)

Radius: Type = 26 (0x1A) Vendor-Specific

Radius: Length = 34 (0x22)

Radius: Vendor ID = 9 (0x00000009)

Radius: Type = 1 (0x01) Cisco-AV-pair

Radius: Length = 28 (0x1C)

Radius: Value (String) =

69 70 3a 73 6f 75 72 63 65 2d 69 70 3d 31 30 2e | ip:source-ip=10.

31 30 36 2e 34 39 2e 31 31 31 | 106.49.111

Radius: Type = 26 (0x1A) Vendor-Specific

Radius: Length = 26 (0x1A)

Radius: Vendor ID = 3076 (0x00000C04)

Radius: Type = 146 (0x92) Tunnel-Group-Name

Radius: Length = 20 (0x14)

Radius: Value (String) =

41 4e 59 43 4f 4e 4e 45 43 54 2d 50 52 4f 46 49 | ANYCONNECT-PROFI

4c 45 | LE

Radius: Type = 26 (0x1A) Vendor-Specific

Radius: Length = 12 (0x0C)

Radius: Vendor ID = 3076 (0x00000C04)

Radius: Type = 150 (0x96) Client-Type

Radius: Length = 6 (0x06)

Radius: Value (Integer) = 2 (0x0002)



```
send pkt 10.106.50.20/1645
rip 0x74251058 state 7 id 7
rad_vrfy() : response message verified
rip 0x74251058
: chall_state ''
: state 0x7
: reqauth:
    b6 c2 bf 25 cf 80 53 a9 a2 3d c8 ca 74 05 27 5c
: info 0x74251190
    session_id 0x8
    request_id 0x7
user 'cisco'
response '***'
app 0
reason 0
skey 'testing123'
sip 10.106.50.20
type 1
```

RADIUS packet decode (response)

-----

Raw packet data (length = 80).....

```
0b 07 00 50 ed 7a 06 92 f7 18 16 6b 97 d4 83 5f | ...P.z.....k..._
be 9b d7 29 18 12 75 6b 35 36 58 49 4f 6e 35 31 | ...)..uk56XI0n51
58 36 4b 75 4c 74 12 24 45 6e 74 65 72 20 79 6f | X6KuLt.$Enter yo
75 72 20 54 4f 4b 45 4e 20 6f 6e 65 2d 74 69 6d | ur TOKEN one-tim
65 20 70 61 73 73 77 6f 72 64 1b 06 00 00 00 5a | e password.....Z
```

Parsed packet data.....

Radius: Code = 11 (0x0B)

Radius: Identifier = 7 (0x07)

Radius: Length = 80 (0x0050)

Radius: Vector: ED7A0692F718166B97D4835FBE9BD729

Radius: Type = 24 (0x18) State

Radius: Length = 18 (0x12)

Radius: Value (String) =

75 6b 35 36 58 49 4f 6e 35 31 58 36 4b 75 4c 74 | uk56XIO n51X6KuLt

Radius: Type = 18 (0x12) Reply-Message

Radius: Length = 36 (0x24)

Radius: Value (String) =

45 6e 74 65 72 20 79 6f 75 72 20 54 4f 4b 45 4e | Enter your TOKEN

20 6f 6e 65 2d 74 69 6d 65 20 70 61 73 73 77 6f | one-time passwo

72 64 | rd

Radius: Type = 27 (0x1B) Session-Timeout

Radius: Length = 6 (0x06)

Radius: Value (Hex) = 0x5A

rad\_procpkt: CHALLENGE

radius mkreq: 0x8

old request 0x8 --> 8 (0x74251058), state 3

wait pass - pass '\*\*\*'. make request

RADIUS\_REQUEST

radius.c: rad\_mkpkt

rad\_mkpkt: ip:source-ip=10.106.49.111

RADIUS packet decode (authentication request)

-----

Raw packet data (length = 198).....

01 08 00 c6 b6 c2 bf 25 cf 80 53 a9 a2 3d c8 ca | .....%..S..=..

74 05 27 5c 01 07 63 69 73 63 6f 02 12 83 c4 00 | t.'\..cisco.....

3e 56 73 71 bc 52 47 b0 81 b4 18 ae 34 05 06 00 | >Vsq.RG.....4...

```

00 40 00 1e 0f 31 30 2e 31 30 36 2e 34 38 2e 31 | .@...10.106.48.1
39 31 1f 0f 31 30 2e 31 30 36 2e 34 39 2e 31 31 | 91..10.106.49.11
31 3d 06 00 00 00 05 42 0f 31 30 2e 31 30 36 2e | 1=....B.10.106.
34 39 2e 31 31 31 04 06 0a 6a 30 bf 18 12 75 6b | 49.111...j0...uk
35 36 58 49 4f 6e 35 31 58 36 4b 75 4c 74 1a 22 | 56XI0n51X6KuLt."
00 00 00 09 01 1c 69 70 3a 73 6f 75 72 63 65 2d | .....ip:source-
69 70 3d 31 30 2e 31 30 36 2e 34 39 2e 31 31 31 | ip=10.106.49.111
1a 1a 00 00 0c 04 92 14 41 4e 59 43 4f 4e 4e 45 | .....ANYCONNE
43 54 2d 50 52 4f 46 49 4c 45 1a 0c 00 00 0c 04 | CT-PROFILE.....
96 06 00 00 00 02 | .....

```

Parsed packet data.....

Radius: Code = 1 (0x01)

Radius: Identifier = 8 (0x08)

Radius: Length = 198 (0x00C6)

Radius: Vector: B6C2BF25CF8053A9A23DC8CA7405275C

Radius: Type = 1 (0x01) User-Name

Radius: Length = 7 (0x07)

Radius: Value (String) =

```
63 69 73 63 6f | cisco
```

Radius: Type = 2 (0x02) User-Password

Radius: Length = 18 (0x12)

Radius: Value (String) =

```
83 c4 00 3e 56 73 71 bc 52 47 b0 81 b4 18 ae 34 | ...>Vsq.RG.....4
```

Radius: Type = 5 (0x05) NAS-Port

Radius: Length = 6 (0x06)

Radius: Value (Hex) = 0x4000

Radius: Type = 30 (0x1E) Called-Station-Id

Radius: Length = 15 (0x0F)

Radius: Value (String) =

```
31 30 2e 31 30 36 2e 34 38 2e 31 39 31 | 10.106.48.191
```

Radius: Type = 31 (0x1F) Calling-Station-Id

Radius: Length = 15 (0x0F)

Radius: Value (String) =

31 30 2e 31 30 36 2e 34 39 2e 31 31 31 | 10.106.49.111

Radius: Type = 61 (0x3D) NAS-Port-Type

Radius: Length = 6 (0x06)

Radius: Value (Hex) = 0x5

Radius: Type = 66 (0x42) Tunnel-Client-Endpoint

Radius: Length = 15 (0x0F)

Radius: Value (String) =

31 30 2e 31 30 36 2e 34 39 2e 31 31 31 | 10.106.49.111

Radius: Type = 4 (0x04) NAS-IP-Address

Radius: Length = 6 (0x06)

Radius: Value (IP Address) = 10.106.48.191 (0x0A6A30BF)

Radius: Type = 24 (0x18) State

Radius: Length = 18 (0x12)

Radius: Value (String) =

75 6b 35 36 58 49 4f 6e 35 31 58 36 4b 75 4c 74 | uk56XI0n51X6KuLt

Radius: Type = 26 (0x1A) Vendor-Specific

Radius: Length = 34 (0x22)

Radius: Vendor ID = 9 (0x00000009)

Radius: Type = 1 (0x01) Cisco-AV-pair

Radius: Length = 28 (0x1C)

Radius: Value (String) =

69 70 3a 73 6f 75 72 63 65 2d 69 70 3d 31 30 2e | ip:source-ip=10.

31 30 36 2e 34 39 2e 31 31 31 | 106.49.111

Radius: Type = 26 (0x1A) Vendor-Specific

Radius: Length = 26 (0x1A)

Radius: Vendor ID = 3076 (0x00000C04)

Radius: Type = 146 (0x92) Tunnel-Group-Name

Radius: Length = 20 (0x14)

Radius: Value (String) =

41 4e 59 43 4f 4e 4e 45 43 54 2d 50 52 4f 46 49 | ANYCONNECT-PROFI  
4c 45 | LE

Radius: Type = 26 (0x1A) Vendor-Specific

Radius: Length = 12 (0x0C)

Radius: Vendor ID = 3076 (0x00000C04)

Radius: Type = 150 (0x96) Client-Type

Radius: Length = 6 (0x06)

Radius: Value (Integer) = 2 (0x0002)

send pkt 10.106.50.20/1645

rip 0x74251058 state 7 id 8

rad\_vrfy() : response message verified

rip 0x74251058

: chall\_state 'uk56XI0n51X6KuLt'

: state 0x7

: reqauth:

b6 c2 bf 25 cf 80 53 a9 a2 3d c8 ca 74 05 27 5c

: info 0x74251190

session\_id 0x8

request\_id 0x8

user 'cisco'

response '\*\*\*'

app 0

reason 0

skey 'testing123'

sip 10.106.50.20

type 1

RADIUS packet decode (response)

-----

Raw packet data (length = 44).....

```
02 08 00 2c c0 80 63 1c 3e 43 a4 bd 46 78 bd 68 | .....c.>C..Fx.h
49 29 23 bd 12 18 41 75 74 68 65 6e 74 69 63 61 | I)#...Authentica
74 69 6f 6e 20 73 75 63 63 65 73 73 | tion success
```

Parsed packet data.....

Radius: Code = 2 (0x02)

Radius: Identifier = 8 (0x08)

Radius: Length = 44 (0x002C)

Radius: Vector: C080631C3E43A4BD4678BD68492923BD

Radius: Type = 18 (0x12) Reply-Message

Radius: Length = 24 (0x18)

Radius: Value (String) =

```
41 75 74 68 65 6e 74 69 63 61 74 69 6f 6e 20 73 | Authentication s
75 63 63 65 73 73 | uccess
```

rad\_procpkt: ACCEPT

RADIUS\_ACCESS\_ACCEPT: normal termination

RADIUS\_DELETE

remove\_req 0x74251058 session 0x8 id 8

free\_rip 0x74251058

radius: send queue empty

## Información Relacionada

- [Configuración de AnyConnect Secure Mobility Client con túneles divididos en ASA](#)
- [Autenticación RSA SecurID para clientes AnyConnect en una configuración de cabecera de Cisco IOS](#)
- [Uso del servidor Token RSA y del protocolo SDI para ASA y ACS](#)

- [Guía de configuración de ASA AnyConnect Double Authentication with Certificate Validation, Mapping, and Pre-Fill](#)
- [Soporte Técnico y Documentación - Cisco Systems](#)

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