

Configurazione dell'autenticazione passiva con accesso VPN ad accesso remoto in Gestione dispositivi Firepower

Sommario

[Introduzione](#)

[Prerequisiti](#)

[Requisiti](#)

[Componenti usati](#)

[Premesse](#)

[Configurazione](#)

[Verifica](#)

[Risoluzione dei problemi](#)

[Informazioni correlate](#)

Introduzione

Questo documento descrive come configurare l'autenticazione passiva su Firepower Threat Defense (FTD) tramite Firepower Device Manager (FDM) con login VPN ad accesso remoto (RA VPN) con AnyConnect.

Prerequisiti

Requisiti

Cisco raccomanda la conoscenza dei seguenti argomenti:

- Gestione periferiche Firepower.
- VPN ad accesso remoto.
- Criteri di identità.

Componenti usati

Le informazioni fornite in questo documento si basano sulle seguenti versioni software e hardware:

- Firepower Threat Defense (FTD) versione 7.0
- Cisco AnyConnect Secure Mobility Client versione 4.10
- Active Directory (AD)

Le informazioni discusse in questo documento fanno riferimento a dispositivi usati in uno specifico ambiente di emulazione. Su tutti i dispositivi menzionati nel documento la configurazione è stata ripristinata ai valori predefiniti. Se la rete è operativa, valutare attentamente eventuali conseguenze derivanti dall'uso dei comandi.

Premesse

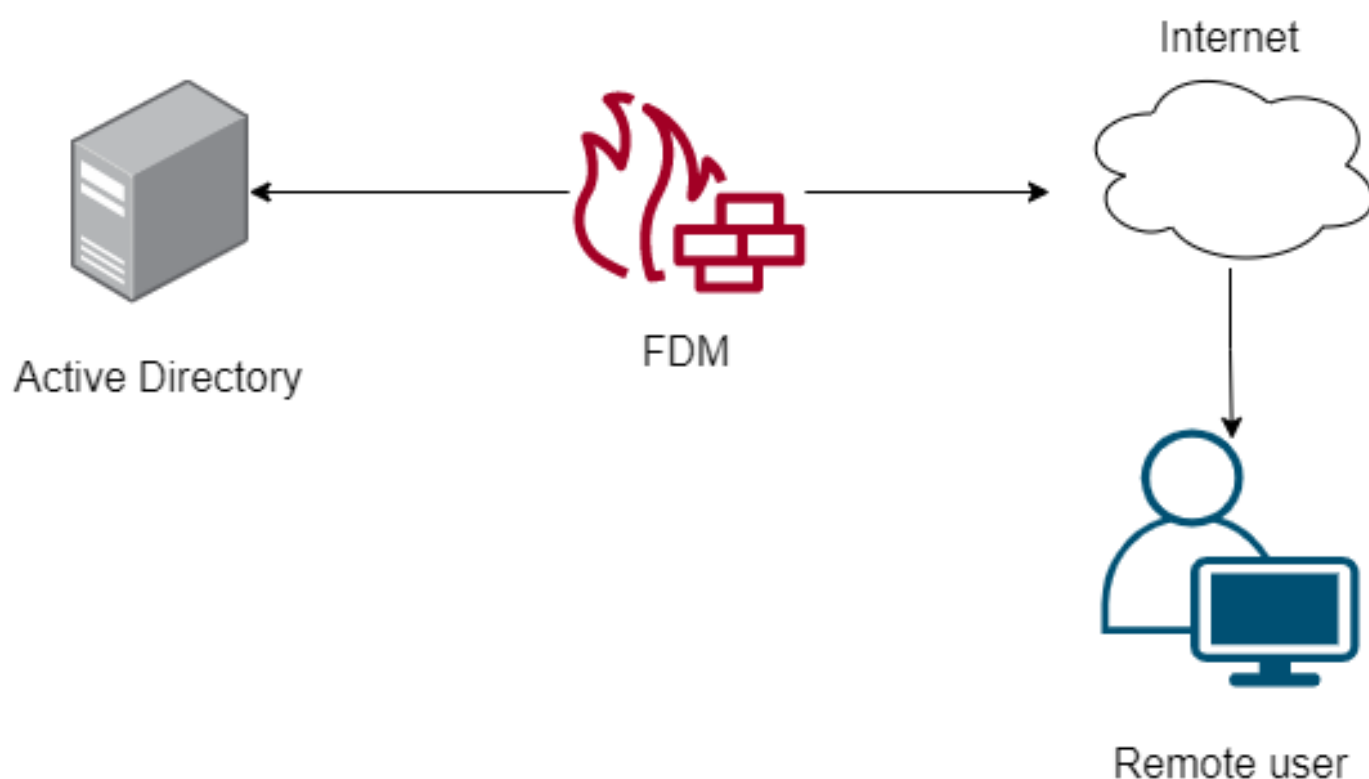
I criteri di identità possono rilevare utenti associati a una connessione. Il metodo utilizzato è l'autenticazione passiva poiché l'identità dell'utente viene ottenuta da altri servizi di autenticazione (LDAP).

In FDM, l'autenticazione passiva può funzionare con due diverse opzioni:

- Accessi VPN ad accesso remoto
- Cisco Identity Services Engine (ISE)

Configurazione

Esempio di rete



In questa sezione viene descritto come configurare l'autenticazione passiva in FDM.

Passaggio 1. Configurazione dell'origine identità

Sia che l'identità dell'utente venga raccolta in modo attivo (tramite la richiesta di autenticazione dell'utente) che passivo, è necessario configurare il server Active Directory (AD) che dispone delle informazioni sull'identità dell'utente.

Passare a **Oggetti>Identity Services** e selezionare l'opzione AD per aggiungere Active Directory.

Aggiungere la configurazione di Active Directory:

! Identity Realm is used for Identity Policies and Remote Access VPN. Any changes impact all features that use this realm.

Name	AnyConnect_LDAP	Type	Active Directory (AD) ▼
Directory Username	brazil <small>e.g. user@example.com</small>	Directory Password
Base DN	CN=Users,dc=cmonterr,dc=local <small>e.g. ou=user, dc=example, dc=com</small>	AD Primary Domain	cmonterr.local <small>e.g. example.com</small>
Directory Server Configuration			
192.168.26.202:389			Test ▼
Add another configuration			
		CANCEL	OK

Passaggio 2. Configurare la VPN per l'Autorità registrazione

La configurazione della VPN ad accesso remoto può essere verificata in questo [collegamento](#)

Passaggio 3. Configurare il metodo di autenticazione per gli utenti di RA VPN

Nella configurazione di RSA VPN, selezionare il metodo di autenticazione. L'origine dell'identità primaria per l'autenticazione utente deve essere AD.

Primary Identity Source	
Authentication Type	
AAA Only ▼	
Primary Identity Source for User Authentication	Fallback Local Identity Source ⚠
AnyConnect_LDAP ▼	LocalIdentitySource ▼
<input checked="" type="checkbox"/> Strip Identity Source server from username	
<input checked="" type="checkbox"/> Strip Group from Username	

Nota: Nelle Impostazioni globali della VPN AES, deselezionare l'opzione Ignora i criteri di

controllo di accesso per il traffico decriptato (**sysopt allow-vpn**) per consentire la possibilità di usare i criteri di controllo di accesso per ispezionare il traffico proveniente dagli utenti AnyConnect.

Certificate of Device Identity: AnyConnect_VPN

Outside Interface: outside (GigabitEthernet0/0)

Fully-qualified Domain Name for the Outside Interface: fdm.ravpn
e.g. ravpn.example.com

Port: 443
e.g. 8080

Access Control for VPN Traffic
Decrypted VPN traffic is subjected to access control policy inspection by default. Enabling the Bypass Access Control policy for decrypted traffic option bypasses the access control policy, but for remote access VPN, the VPN Filter ACL and the authorization ACL downloaded from the AAA server are still applied to VPN traffic

Bypass Access Control policy for decrypted traffic (sysopt permit-vpn)

NAT Exempt

Inside Interfaces: The interfaces through which remote access VPN users can connect to the internal networks
+ inside (GigabitEthernet0/1)

Inside Networks: The internal networks remote access VPN users are allowed to use. The IP versions of the internal networks and address pools must match, either IPv4, IPv6, or both.
+ FDM_Local_network

Passaggio 4. Configurazione dei criteri di identità per l'autenticazione passiva

Per configurare l'autenticazione passiva, è necessario creare il criterio di identità. Il criterio deve includere gli elementi seguenti:

- Origine identità AD: Lo stesso che viene aggiunto al passaggio numero 1
- Azione: AUTENTICAZIONE PASSIVA

Per configurare la regola di identità, passare a **Criteri>Identità** >pulsante seleziona[+]per aggiungere una nuova regola di identità.

- Definire le subnet di origine e di destinazione a cui applicare l'autenticazione passiva.

Passaggio 5. Creare la regola di controllo d'accesso nei criteri di controllo d'accesso

Configurare la regola di controllo d'accesso per consentire o bloccare il traffico in base agli utenti.

#	NAME	ACTION	SOURCE			DESTINATION			APPLICATIONS	URLS	USERS	ACTIONS
			ZONES	NETWORKS	PORTS	ZONES	NETWORKS	PORTS				
> 1	Inside_Outside...	Allow	inside_zone	ANY	ANY	outside_zone	ANY	ANY	ANY	ANY	brazil	

Per configurare gli utenti o il gruppo di utenti in modo che dispongano dell'autenticazione passiva, selezionare la scheda Utenti. È possibile aggiungere un gruppo di utenti o un singolo utente.

Distribuire le modifiche.

Verifica

Verificare che la connessione di prova con Active Directory sia stata stabilita correttamente

! Identity Realm is used for Identity Policies and Remote Access VPN. Any changes impact all features that use this realm.

Name	AnyConnect_LDAP	Type	Active Directory (AD)
Directory Username	brazil	Directory Password
<i>e.g. user@example.com</i>			
Base DN	CN=Users,dc=cmonterr,dc=local	AD Primary Domain	cmonterr.local
<i>e.g. ou=user, dc=example, dc=com</i>		<i>e.g. example.com</i>	

Directory Server Configuration

192.168.26.202:389

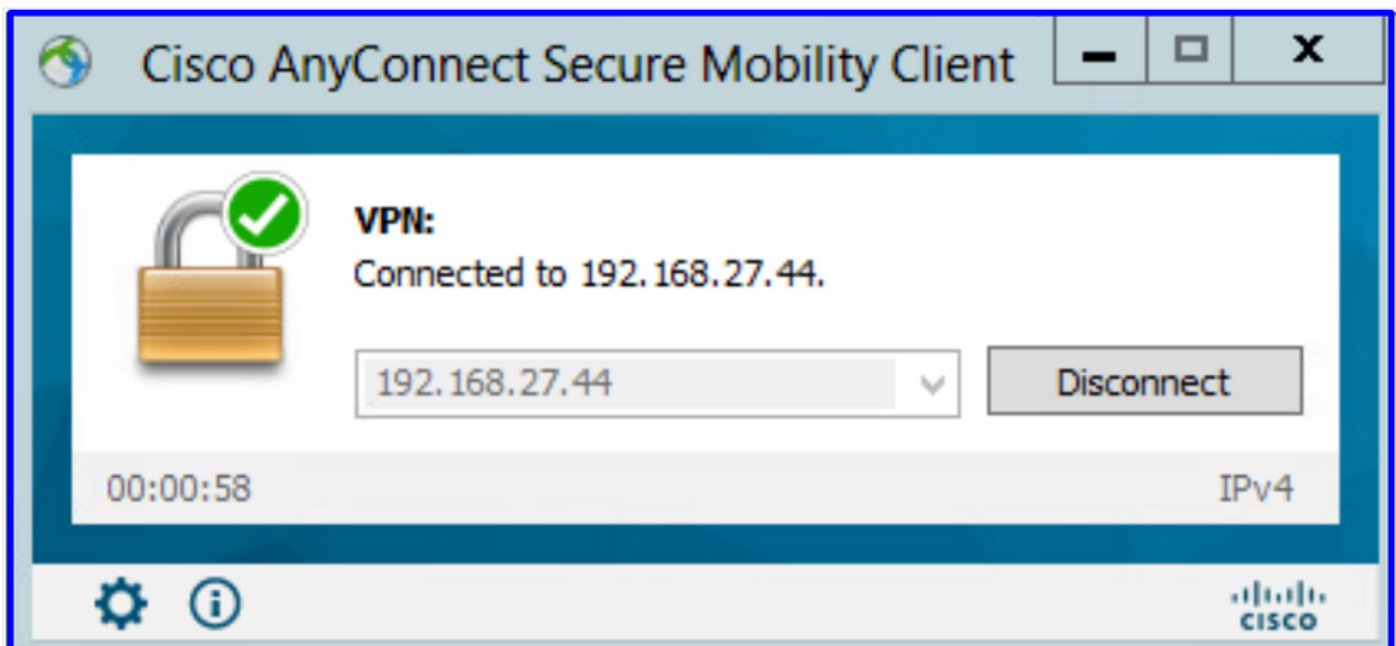
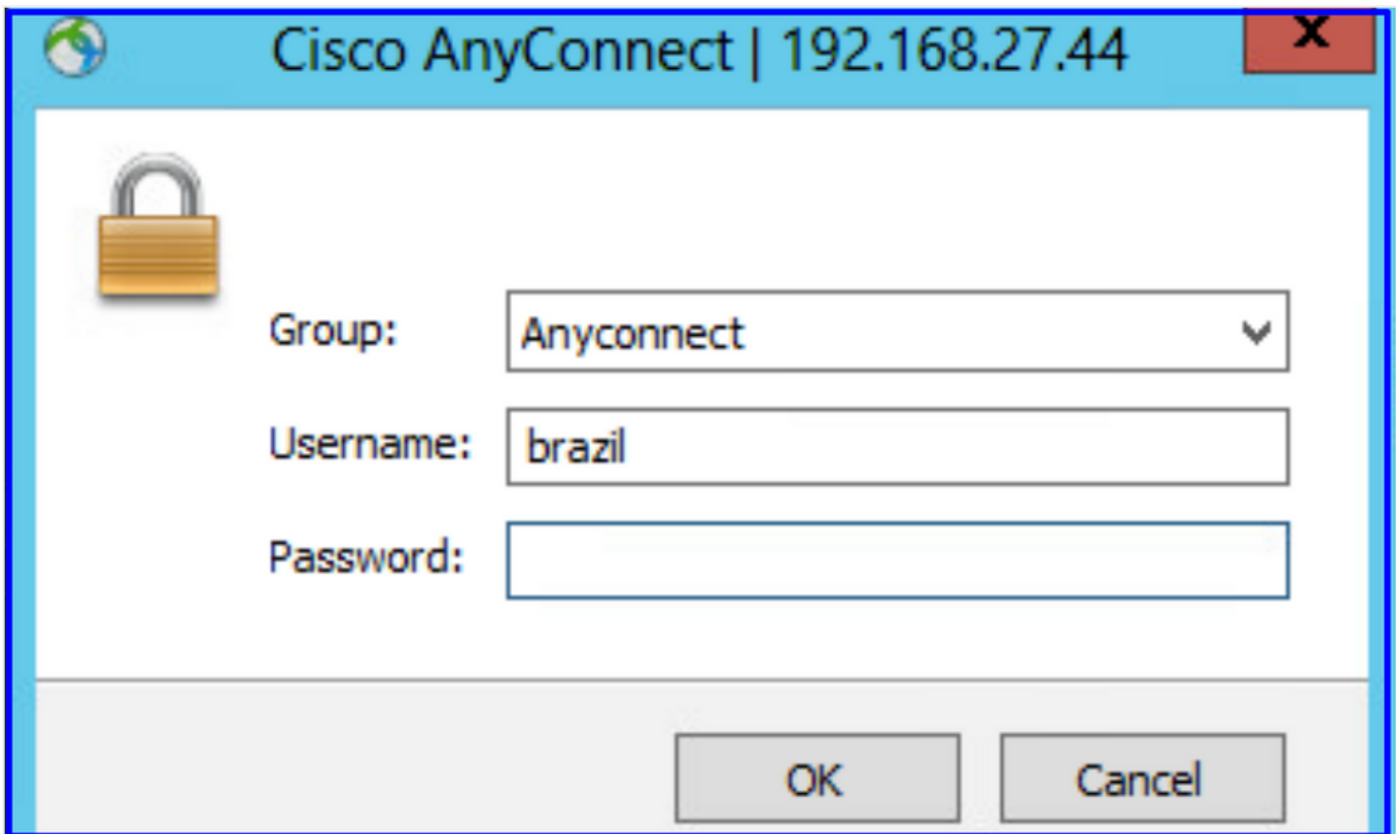
Hostname / IP Address	192.168.26.202	Port	389
<i>e.g. ad.example.com</i>			
Interface	inside (GigabitEthernet0/1)		
Encryption	NONE	Trusted CA certificate	Please select a certificate

TEST ✓ **Connection to realm is successful**

[Add another configuration](#)

CANCEL OK

Verificare che l'utente remoto possa accedere con il client AnyConnect con le relative credenziali di Active Directory.



Verificare che l'utente ottenga un indirizzo IP del pool VPN

```
firepower# show vpn-sessiondb anyconnect filter name brazil
Session Type: AnyConnect
Username      : brazil                Index      : 23
Assigned IP   : 192.168.19.1          Public IP  : 192.168.27.40
Protocol      : AnyConnect-Parent SSL-Tunnel
License       : AnyConnect Premium
Encryption    : AnyConnect-Parent: (1)none SSL-Tunnel: (1)AES-GCM-256
Hashing       : AnyConnect-Parent: (1)none SSL-Tunnel: (1)SHA384
Bytes Tx      : 15818                 Bytes Rx   : 2494
Group Policy  : DfltGrpPolicy         Tunnel Group : Anyconnect
Login Time    : 13:22:20 UTC Wed Jul 21 2021
Duration      : 0h:00m:13s
Inactivity    : 0h:00m:00s
VLAN Mapping  : N/A                   VLAN       : none
Audt Sess ID  : 000000000001700060f81f8c
Security Grp  : none                   Tunnel Zone : 0
firepower#
```

Risoluzione dei problemi

È possibile utilizzare `user_map_query.pl` script per verificare che FDM disponga del mapping di indirizzi IP utente

```
root@firepower:~# user_map_query.pl -u brazil
WARNING: This script was not tested on this major version (7.0.0)! The results may be unexpected.
Current Time: 07/21/2021 13:23:38 UTC
Getting information on username(s)...

-----
User #1: brazil
-----
ID:          5
Last Seen:   07/21/2021 13:22:20 UTC
for_policy:  1

=====
|           Database           |
=====

##) IP Address
1) ::ffff:192.168.19.1

##) Group Name (ID)
1) Domain Users (11)
root@firepower:~# user_map_query.pl -i 192.168.19.1
WARNING: This script was not tested on this major version (7.0.0)! The results may be unexpected.
Current Time: 07/21/2021 13:23:50 UTC
Getting information on IP Address(es)...

-----
IP #1: 192.168.19.1
-----

=====
|           Database           |
=====

##) Username (ID)
1) brazil (5)
   for_policy: 1
   Last Seen: 07/21/2021 13:22:20 UTC
root@firepower:~# █
```


In modalità clish è possibile configurare:

system support identity-debug per verificare se il reindirizzamento ha esito positivo.

```
> system support identity-debug
Enable firewall-engine-debug too? [n]: y
Please specify an IP protocol:
Please specify a client IP address: 192.168.19.1
Please specify a client port:
Please specify a server IP address:
Please specify a server port:
Monitoring identity and firewall debug messages

192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 Starting authentication (sfAuthCheckRules
params) with zones 2 -> 2, port 62757 -> 53, geo 14467064 -> 14467082
192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 Retrieved ABP info:
192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 abp src
192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 abp dst
192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 new firewall session
192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 HitCount data sent for rule id: 268435458,
192.168.19.1-62757 > 72.163.47.11-53 17 AS 1-1 I 0 allow action
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 Starting authentication (sfAuthCheckRules params)
with zones 2 -> 2, port 62757 -> 53, geo 14467064 -> 14467082
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 Retrieved ABP info:
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 abp src
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 abp dst
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 new firewall session
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 HitCount data sent for rule id: 268435458,
192.168.19.1-62757 > 8.8.8.8-53 17 AS 1-1 I 1 allow action
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 Starting authentication (sfAuthCheckRules
params) with zones 2 -> 2, port 53015 -> 443, geo 14467064 -> 14467082
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 Retrieved ABP info:
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 abp src
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 abp dst
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 new firewall session
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 HitCount data sent for rule id: 268435458,
192.168.19.1-53015 > 20.42.0.16-443 6 AS 1-1 I 0 allow action
192.168.19.1-52166 > 20.42.0.16-443 6 AS 1-1 I 1 deleting firewall session flags = 0x10001,
fwFlags = 0x102, session->logFlags = 010001
192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 Starting authentication (sfAuthCheckRules
params) with zones 2 -> 2, port 65207 -> 53, geo 14467064 -> 14467082
192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 Retrieved ABP info:
192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 abp src
192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 abp dst
192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 new firewall session
192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 HitCount data sent for rule id: 268435458,
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192.168.19.1-65207 > 72.163.47.11-53 17 AS 1-1 I 1 allow action
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 Starting authentication (sfAuthCheckRules params)
with zones 2 -> 2, port 65207 -> 53, geo 14467064 -> 14467082
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 Retrieved ABP info:
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 abp src
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 abp dst
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 new firewall session
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 HitCount data sent for rule id: 268435458,
192.168.19.1-65207 > 8.8.8.8-53 17 AS 1-1 I 0 allow action
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 Starting authentication (sfAuthCheckRules params)
with zones 2 -> 2, port 65209 -> 53, geo 14467064 -> 14467082
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 Retrieved ABP info:
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 abp src
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 abp dst
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 new firewall session
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 HitCount data sent for rule id: 268435458,
192.168.19.1-65209 > 8.8.8.8-53 17 AS 1-1 I 0 allow action
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 Starting authentication (sfAuthCheckRules
params) with zones 2 -> 2, port 65211 -> 53, geo 14467064 -> 14467082
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 Retrieved ABP info:
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 abp src
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 abp dst
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 new firewall session
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 HitCount data sent for rule id: 268435458,
192.168.19.1-65211 > 72.163.47.11-53 17 AS 1-1 I 1 allow action
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 Starting authentication (sfAuthCheckRules
params) with zones 2 -> 2, port 61823 -> 53, geo 14467064 -> 14467082
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 Retrieved ABP info:
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 abp src
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 abp dst
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 new firewall session
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 HitCount data sent for rule id: 268435458,
192.168.19.1-61823 > 72.163.47.11-53 17 AS 1-1 I 1 allow action
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 Starting authentication (sfAuthCheckRules params)
with zones 2 -> 2, port 61823 -> 53, geo 14467064 -> 14467082
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 Retrieved ABP info:
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 abp src
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 abp dst
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 new firewall session
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 HitCount data sent for rule id: 268435458,
192.168.19.1-61823 > 8.8.8.8-53 17 AS 1-1 I 0 allow action
192.168.19.1-57747 > 72.163.47.11-53 17 AS 1-1 I 1 deleting firewall session flags = 0x10001,
fwFlags = 0x102, session->logFlags = 010001
192.168.19.1-57747 > 72.163.47.11-53 17 AS 1-1 I 1 Logging EOF as part of session delete with

```
rule_id = 268435458 ruleAction = 2 ruleReason = 0
192.168.19.1-57747 > 8.8.8.8-53 17 AS 1-1 I 0 deleting firewall session flags = 0x10001, fwFlags
= 0x102, session->logFlags = 010001
192.168.19.1-57747 > 8.8.8.8-53 17 AS 1-1 I 0 Logging EOF as part of session delete with rule_id
= 268435458 ruleAction = 2 ruleReason = 0
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 Starting authentication (sfAuthCheckRules
params) with zones 2 -> 2, port 53038 -> 443, geo 14467064 -> 14467082
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 Retrieved ABP info:
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 abp src
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 abp dst
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 new firewall session
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 HitCount data sent for rule id: 268435458,
192.168.19.1-53038 > 20.42.0.16-443 6 AS 1-1 I 0 allow action
192.168.19.1-57841 > 72.163.47.11-53 17 AS 1-1 I 1 deleting firewall session flags = 0x10001,
fwFlags = 0x102, session->logFlags = 010001
192.168.19.1-57841 > 72.163.47.11-53 17 AS 1-1 I 1 Logging EOF as part of session delete with
rule_id = 268435458 ruleAction = 2 ruleReason = 0
192.168.19.1-57841 > 8.8.8.8-53 17 AS 1-1 I 0 deleting firewall session flags = 0x10001, fwFlags
= 0x102, session->logFlags = 010001
192.168.19.1-57841 > 8.8.8.8-53 17 AS 1-1 I 0 Logging EOF as part of session delete with rule_id
= 268435458 ruleAction = 2 ruleReason = 0
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 Starting authentication (sfAuthCheckRules params)
with zones 2 -> 2, port 64773 -> 53, geo 14467064 -> 14467082
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 Retrieved ABP info:
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 abp src
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 abp dst
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 matched auth rule id = 130027046 user_id = 5
realm_id = 3
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 new firewall session
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 using HW or preset rule order 2,
'Inside_Outside_Rule', action Allow and prefilter rule 0
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 HitCount data sent for rule id: 268435458,
192.168.19.1-64773 > 8.8.8.8-53 17 AS 1-1 I 0 allow action
```

Informazioni correlate

Configura VPN ad accesso remoto su FTD Gestito da FDM

<https://www.cisco.com/c/en/us/support/docs/security/anyconnect-secure-mobility-client/215532-configure-remote-access-vpn-on-ftd-manag.html>