

# 在Firepower设备管理器上配置被动身份验证和远程访问VPN登录

## 目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[背景信息](#)

[配置](#)

[确认](#)

[故障排除](#)

[相关信息](#)

## 简介

本文档介绍如何通过Firepower设备管理器(FDM)配置Firepower威胁防御(FTD)上的被动身份验证 (使用AnyConnect进行远程访问VPN登录[RA VPN])。

## 先决条件

### 要求

Cisco 建议您了解以下主题：

- Firepower设备管理器。
- 远程访问 VPN。
- 身份策略。

### 使用的组件

本文档中的信息基于以下软件和硬件版本：

- Firepower威胁防御(FTD)版本7.0
- 思科AnyConnect安全移动客户端版本4.10
- Active Directory (AD)

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始 (默认) 配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

### 背景信息

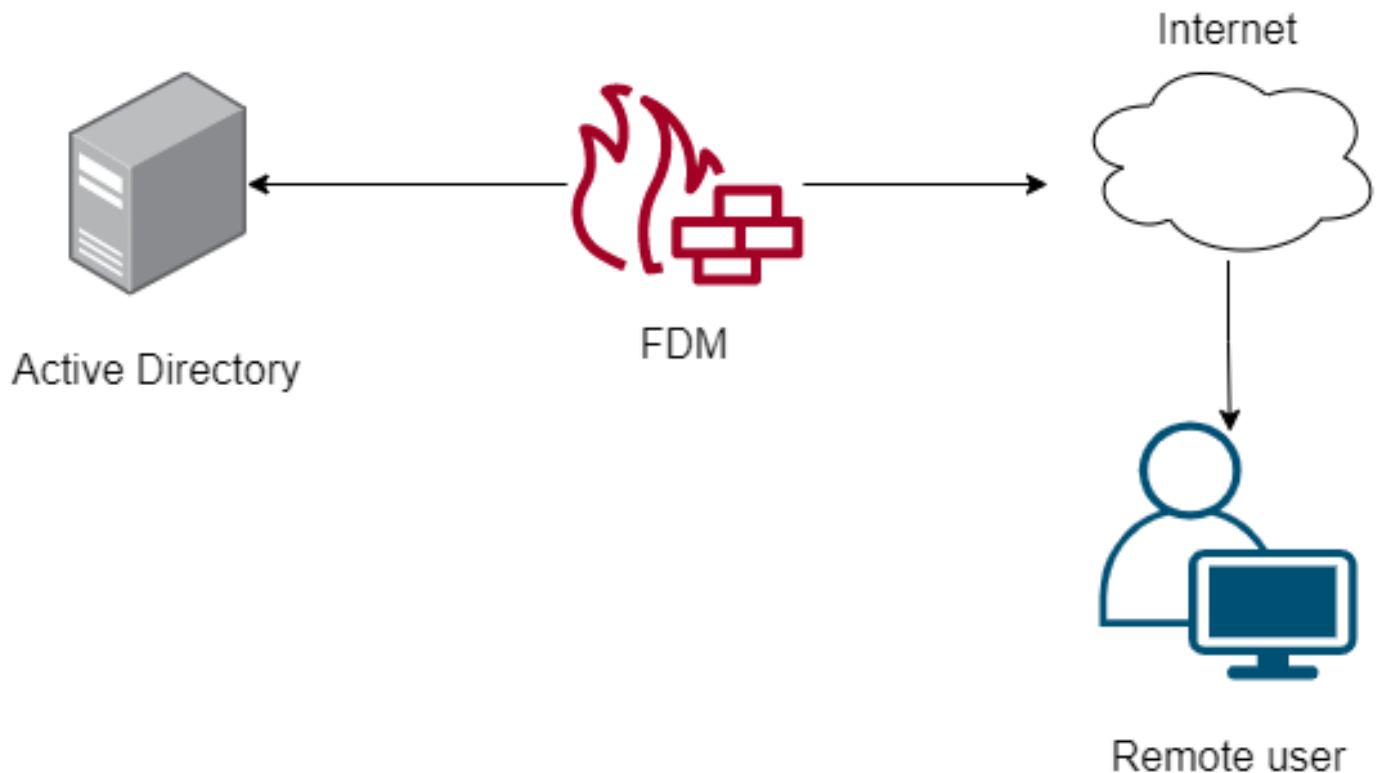
身份策略可以检测与连接关联的用户。使用的方法是被动身份验证，因为用户身份是从其他身份验证服务(LDAP)获取的。

在FDM中，被动身份验证可以使用两个不同的选项：

- 远程访问VPN登录
- 思科身份服务引擎(ISE)

## 配置

### 网络图



本节介绍如何在FDM上配置被动身份验证。

#### 步骤1.配置身份源

无论您主动（通过用户身份验证提示）还是被动收集用户身份，都需要配置具有用户身份信息的Active Directory(AD)服务器。

导航到**Objects > Identity** 服务，然后选择AD以添加Active Directory。

添加Active Directory配置：

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

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

## 步骤2.配置RA VPN

可在此链接中查看远程访问VPN配置[配置](#)

## 步骤3.配置RA VPN用户的身份验证方法

在RA VPN配置中，选择身份验证方法。用户身份验证的主要独立源必须是AD。

<b>Primary Identity Source</b>	
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	

**注意：**在RA VPN的全局设置中，取消选中Bypass Access Control Policy for decrypted traffic(**sysopt permit-vpn**)选项，以允许使用访问控制策略来检查来自AnyConnect用户的流量

o

The screenshot shows a configuration page for a VPN. It is divided into several sections:

- Certificate of Device Identity:** A dropdown menu set to "AnyConnect\_VPN".
- Outside Interface:** A dropdown menu set to "outside (GigabitEthernet0/0)".
- Fully-qualified Domain Name for the Outside Interface:** A text input field containing "fdm.ravpn". Below it is a hint: "e.g. ravpn.example.com".
- Port:** A text input field containing "443". Below it is a hint: "e.g. 8080".
- Access Control for VPN Traffic:** A section with explanatory text: "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". Below this text is a checkbox labeled "Bypass Access Control policy for decrypted traffic (sysopt permit-vpn)", which is currently unchecked and highlighted with a red box.
- NAT Exempt:** A section with a toggle switch turned on (orange) and an information icon. It contains two sub-sections:
  - Inside Interfaces:** A description: "The interfaces through which remote access VPN users can connect to the internal networks". Below it is a "+" button and a dropdown menu set to "inside (GigabitEthernet0/1)".
  - Inside Networks:** A description: "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." Below it is a "+" button and a dropdown menu set to "FDM\_Local\_network".

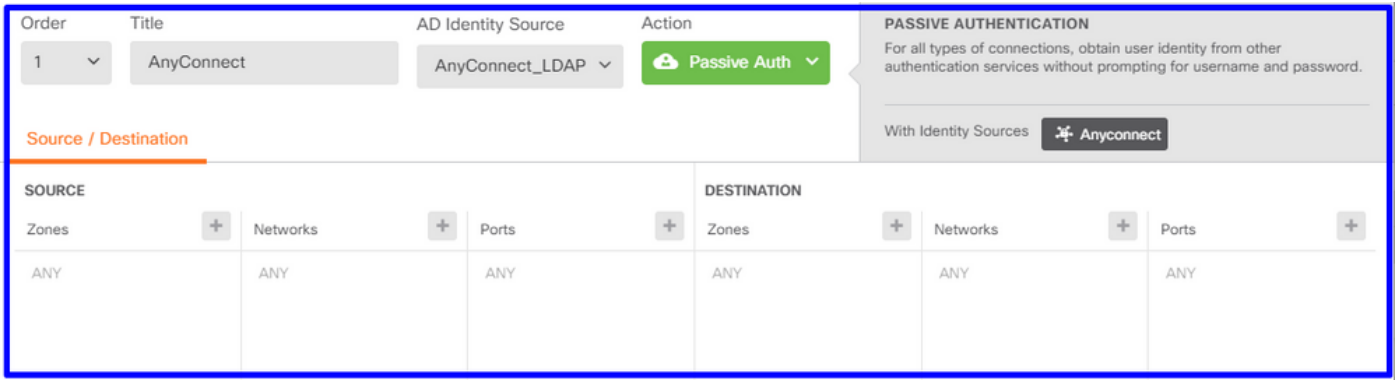
#### 步骤4.配置被动身份验证的身份策略

要配置被动身份验证，需要创建身份策略，策略必须具有以下元素：

- AD身份源：步骤1中添加的相同
- 操作：被动身份验证

要配置身份规则，请导航至Policies> Identity >选择[+]按钮以添加新的身份规则。

- 定义应用被动身份验证的源子网和目标子网。

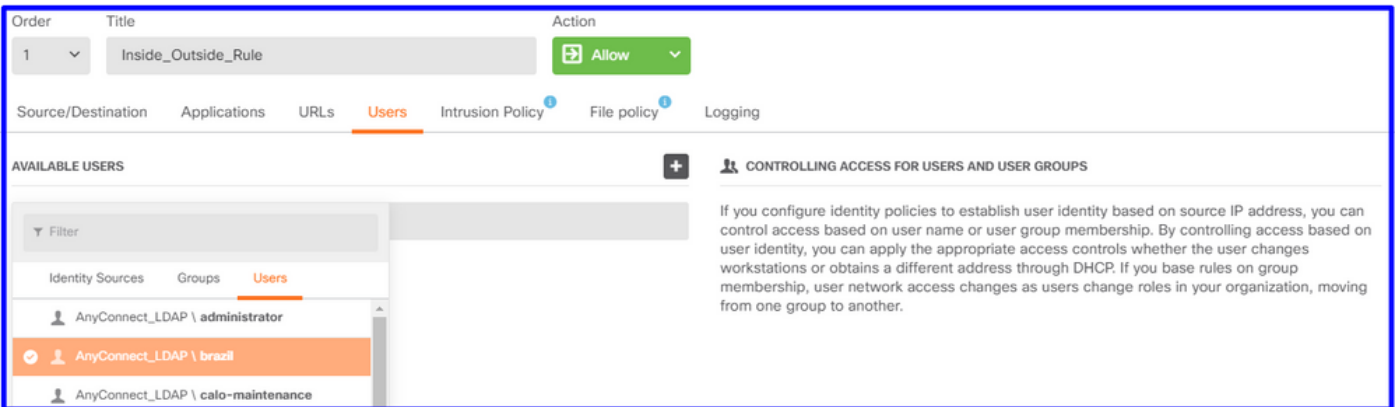


## 步骤5.在访问控制策略中创建访问控制规则

配置访问控制规则以允许或阻止基于用户的流量。

#	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	

要将用户或用户组配置为具有被动身份验证，请选择Users选项卡。您可以添加用户组或单个用户。



部署更改。

## 确认

验证与AD的测试连接是否成功

**!** 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**

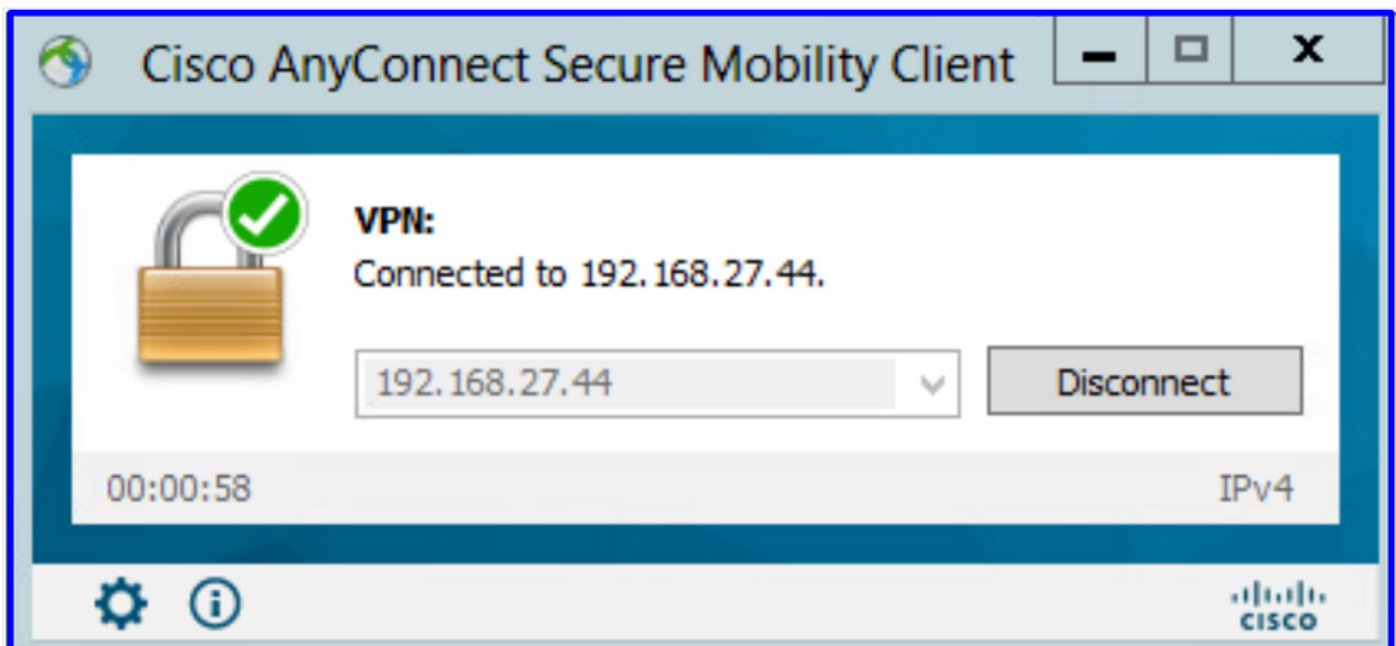
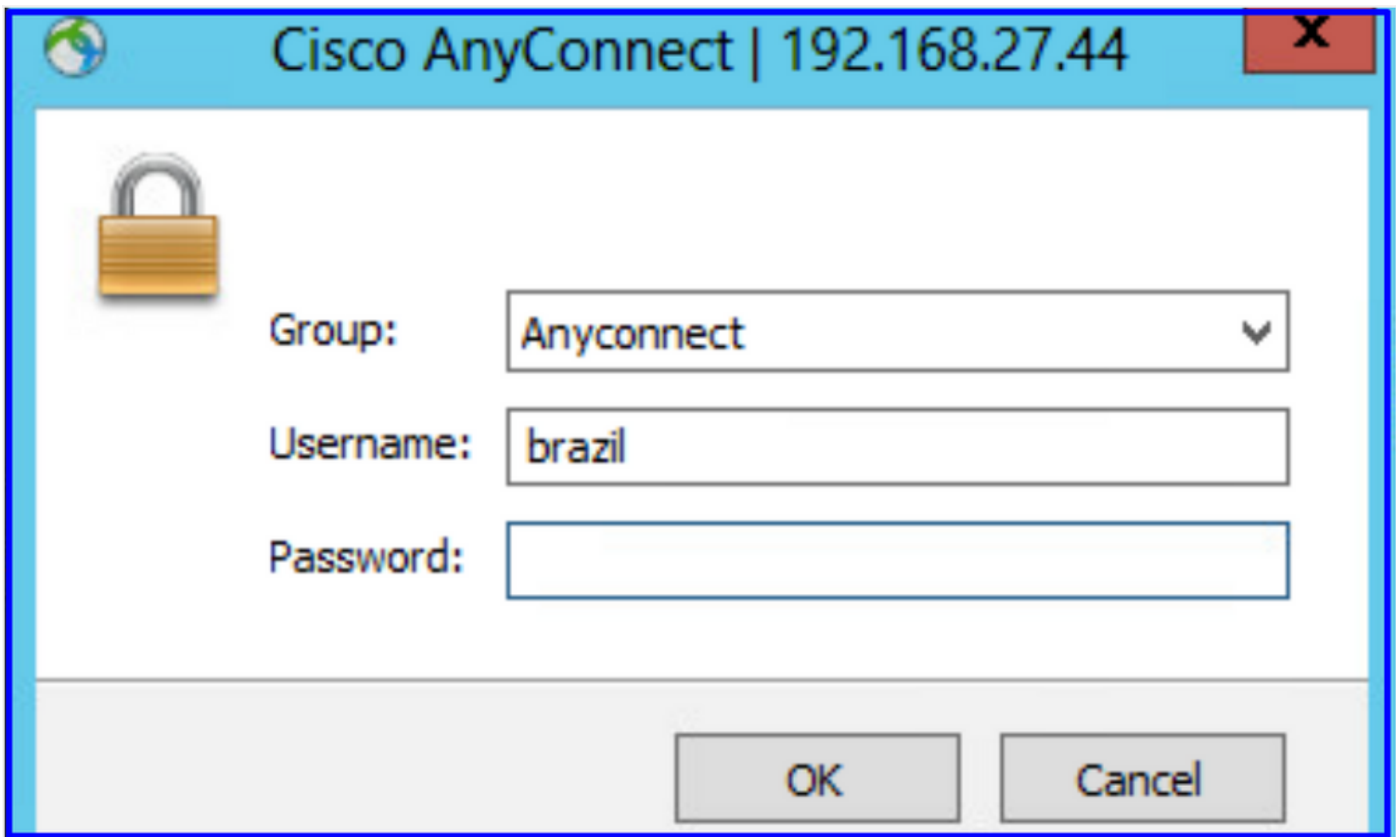
Hostname / IP Address	Port
192.168.26.202	389
<i>e.g. ad.example.com</i>	
Interface	
inside (GigabitEthernet0/1)	
Encryption	Trusted CA certificate
NONE	Please select a certificate

**TEST** ✓ **Connection to realm is successful**

[Add another configuration](#)

CANCEL OK

验证远程用户可以使用其AD凭证使用AnyConnect客户端登录。



验证用户是否获取VPN池的IP地址

```
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#
```

## 故障排除

可以使用user\_map\_query.plscript验证FDM是否具有用户IP映射

```
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:~#
```

在clish模式下，您可以配置：



## 系统支持身份调试验证重定向是否成功。

```
> 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,
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
```

## 相关信息

在由FDM管理的FTD上配置远程访问VPN

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