

Configuratie van TrustSec NDAC zaadjes en non-seed apparaten

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Inleiding

Dit document beschrijft hoe u start- en non-zaadapparaten kunt configureren bij gebruik van trustsec met ISE (Identity Services Engine).

Trustsec gebruikt NDAC (Network Devices Admission Control) om een nieuw apparaat te authenticeren voordat het zich bij het trustsec-domein kan aansluiten. Dit voorkomt dat onbevoegden kunnen deelnemen aan de uitwisseling van betrouwbare informatie. Zaden apparaten/auteurs, in dit geval de 6500-schakelaar, moeten handmatig worden ingesteld en RADIUS via IP gebruiken om verbinding te maken met ISE. Niet-zaadapparaten/leveranciers, in dit geval de 3560X, hebben geen directe IP-connectiviteit op ISE en vereisen dat de zaadapparaten om in te schrijven en deze op het netwerk te authenticeren met 802.1X. Zodra het leverende, non-seed apparaat is geauthentiseerd zal een PAC (Protected Access Credentials) van ISE worden voorzien en zal de server informatie worden gedownload. De PAC bevat een gedeelde sleutel en een versleuteld token om in de toekomst veilig contact met ISE te maken.

Voorwaarden

ISE-verificatieserver

Trustsec geschikt zaadapparaat/authenticator

Trustsec-geschikt toestel zonder zaad/smeedster

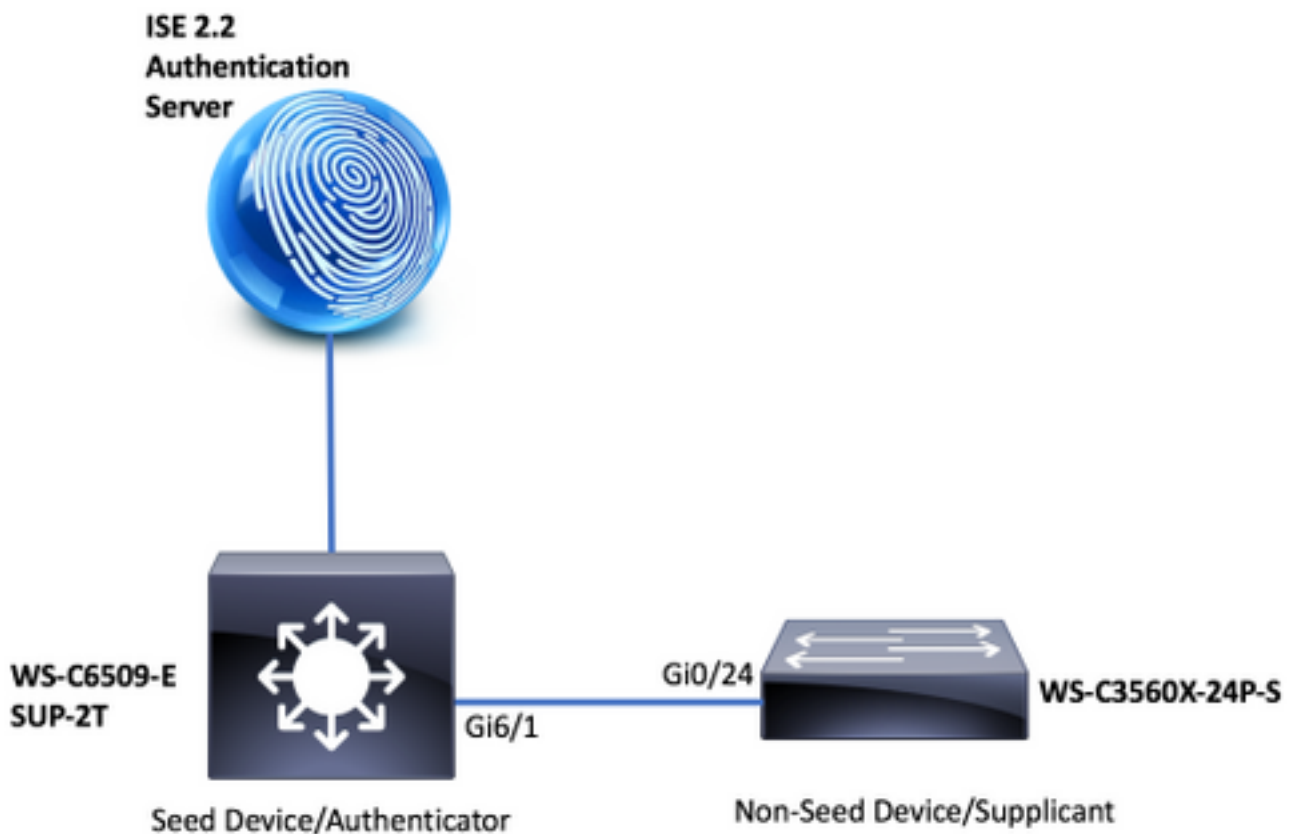
Raadpleeg de nieuwste trustsec-compatibiliteitsmatrix:

<http://www.cisco.com/c/en/us/solutions/enterprise-networks/trustsec/solution-overview-listing.html>

Gebruikte componenten

- ISE 2,2 pleister 2
- WS-C6509-E [VS-SUP2T-10G] S2T54-poorts DS9-mz.SPA.152-1.SY3.bin
- WS-C3560X-24P-S switch c3560e-universalk9-mz.152-4.E4.bin

Netwerkdigram



DAC-topologie

IP-adressen

ISE: 14.36.143.18

6509: 10.122.165.35

3560X: 10.122.160.118

ISE-configuratie

Netwerkkapparaten toevoegen

6500 (zaaizaad)

WorkCenters > TrustSec > Componenten > Network Devices > Add

Apparaatnaam en IP-adres

[Network Devices List](#) > [New Network Device](#)

Network Devices

* Name

Description

* IP Address: /

Radius gedeeld geheim

RADIUS Authentication Settings

RADIUS UDP Settings

Protocol **RADIUS**

* Shared Secret

CoA Port

Credentials Trustsec



Advanced TrustSec Settings

Device Authentication Settings

Use Device ID for TrustSec

Identification

Device Id

* Password

TrustSec Notifications and Updates

* Download environment data every

* Download peer authorization policy every

* Reauthentication every

* Download SGACL lists every

Other TrustSec devices to trust this device

Send configuration changes to device Using CoA CLI (SSH)

Ssh Key

Device Configuration Deployment

Include this device when deploying Security Group Tag Mapping Updates

Device Interface Credentials

* EXEC Mode Username

* EXEC Mode Password

Enable Mode Password

3560X (niet-zaad)

WorkCenters > TrustSec > Componenten > Network Devices > Add

Apparaatnaam en IP-adres

Network Devices

* Name

Description

* IP Address: /

Radius gedeeld geheim

RADIUS Authentication Settings

RADIUS UDP Settings

Protocol **RADIUS**

* Shared Secret

CoA Port

Credentials Trustsec



Advanced TrustSec Settings

Device Authentication Settings

Use Device ID for TrustSec

Identification

Device Id

* Password

TrustSec Notifications and Updates

* Download environment data every

* Download peer authorization policy every

* Reauthentication every ⓘ

* Download SGACL lists every

Other TrustSec devices to trust this device

Send configuration changes to device Using CoA CLI (SSH)

Ssh Key

Device Configuration Deployment

Include this device when deploying Security Group Tag Mapping Updates

Device Interface Credentials

* EXEC Mode Username

* EXEC Mode Password

Enable Mode Password

VertrouwenSEC-beveiligingsgroepen

WorkCenters > TrustSec > Componenten > Beveiligingsgroepen

Security Groups

For Policy Export go to [Administration > System > Backup & Restore > Policy Export Page](#)

| | Icon | Name | SGT (Dec / Hex) | Description |
|--------------------------|------|-----------------------|-----------------|------------------------------------|
| <input type="checkbox"/> | | Auditors | 9/0009 | Auditor Security Group |
| <input type="checkbox"/> | | BYOD | 15/000F | BYOD Security Group |
| <input type="checkbox"/> | | Contractors | 5/0005 | Contractor Security Group |
| <input type="checkbox"/> | | Developers | 8/0008 | Developer Security Group |
| <input type="checkbox"/> | | Development_Servers | 12/000C | Development Servers Security Group |
| <input type="checkbox"/> | | Employees | 4/0004 | Employee Security Group |
| <input type="checkbox"/> | | Guests | 6/0006 | Guest Security Group |
| <input type="checkbox"/> | | Network_Services | 3/0003 | Network Services Security Group |
| <input type="checkbox"/> | | PCI_Servers | 14/000E | PCI Servers Security Group |
| <input type="checkbox"/> | | Point_of_Sale_Systems | 10/000A | Point of Sale Security Group |
| <input type="checkbox"/> | | Production_Servers | 11/000B | Production Servers Security Group |
| <input type="checkbox"/> | | Production_Users | 7/0007 | Production User Security Group |
| <input type="checkbox"/> | | Quarantined_Systems | 255/00FF | Quarantine Security Group |
| <input type="checkbox"/> | | Test_Servers | 13/000D | Test Servers Security Group |
| <input type="checkbox"/> | | TrustSec_Devices | 2/0002 | TrustSec Devices Security Group |
| <input type="checkbox"/> | | Unknown | 0/0000 | Unknown Security Group |

Licentiebeleid voor netwerkapparaat

WorkCenters > TrustSec > TrustSEC Policy > autorisatie voor netwerkapparaten

Network Device Authorization

Define the Network Device Authorization Policy by assigning SGTs to network devices. Drag and drop rules to change the order.

| Rule Name | Conditions | Security Group |
|--|---|------------------|
| <input checked="" type="checkbox"/> NDAC | If DEVICE:Device Type equals to Device Type#All Device Types then | TrustSec_Devices |
| <input checked="" type="checkbox"/> Default Rule | If no rules defined or no match then | Unknown |

Apparaatconfiguratie (6500)

TrustSec Credentials

```
6500#cts credentials id 6500 password Cisc0123
```

AAA configuration

```
6500(config)#aaa new-model
6500(config)#aaa authentication dot1x default group radius
6500(config)#aaa accounting identity default start-stop group radius
6500(config)#aaa authorization network CTSlist group radius
6500(config)#cts authorization list CTSlist
```

Radius Server Configuration

```
6500(config)#radius server ISE
6500(config-radius-server)#address ipv4 14.36.143.18 auth-port 1812 acct-port 1813
6500(config-radius-server)#pac key Cisc0123
```

Recognize and use vendor-specific attributes

```
6500(config)#radius-server vsa send authentication
```

Enable Change of Authorization

```
6500(config)#aaa server radius dynamic-author
6500(config-locsvr-da-radius)#client 14.36.143.18 server-key Cisc0123
```

Enable 802.1X

```
6500(config)#dot1x system-auth-control
```

Switchport TrustSec Configuration

```
6500(config)#int gi6/1
6500(config-if)#switchport mode trunk
6500(config-if)#cts dot1x
6500(config-if-cts-dot1x)#sap mode-list null
6500(config-if-cts-dot1x)#propagate sgt
```

Verificatie

PAC Download

```
6500#show cts pac
AID: 6F5719523570B8D229F23073404E2D37
PAC-Info:
  PAC-type = Cisco Trustsec
  AID: 6F5719523570B8D229F23073404E2D37
  I-ID: 6500
  A-ID-Info: ISE 2.2p1
  Credential Lifetime: 04:27:29 UTC Oct 26 2017
PAC-Opaque:
000200B000030001000400106F5719523570B8D229F23073404E2D370006009400030100801062F6BE70E2CCB6B0D25B
FC81CB5D00000013597A55C100093A8059F0E1A3FAF83A2B7C8332479B7324C0FDC4CBAE9AE4AFD19C614A7DB13C9DBD
06798A344423897745F0F91F19489772E543ED205A9CD0F276A96C4505BF34CB75F132377FE770B77A3D822842DFE3A0
A858130612D08DD58965B09C352E33E74DB3F6B5C7E1F6EC8C30FF215A6FEB3EA7BBC95E
Refresh timer is set for 12w5d
```

Environment Data

```
6500#show cts environment-data
CTS Environment Data
=====
Current state = COMPLETE
Last status = Successful
Local Device SGT:
  SGT tag = 2-02:TrustSec_Devices
Server List Info:
Installed list: CTSServerList1-0001, 1 server(s):
  *Server: 14.36.143.18, port 1812, A-ID 6F5719523570B8D229F23073404E2D37
    Status = ALIVE
    auto-test = TRUE, keywrap-enable = FALSE, idle-time = 60 mins, deadtime = 20 secs
Multicast Group SGT Table:
Security Group Name Table:
  0-fb:Unknown
  2-fb:TrustSec_Devices
  3-fb:Network_Services
  4-fb:Employees
  5-fb:Contractors
  6-fb:Guests
  7-fb:Production_Users
```


8-fb:Developers
9-fb:Auditors
10-fb:Point_of_Sale_Systems
11-fb:Production_Servers
12-fb:Development_Servers
13-fb:Test_Servers
14-fb:PCI_Servers
15-fb:BYOD
255-fb:Quarantined_Systems

Environment Data Lifetime = 86400 secs
Last update time = 20:28:36 UTC Thu Jul 27 2017
Env-data expires in 0:23:47:05 (dd:hr:mm:sec)
Env-data refreshes in 0:23:47:05 (dd:hr:mm:sec)
Cache data applied = NONE
State Machine is running

ISE Live Logs

Operations > RADIUS > Live Logs






PAC-bevoorrading

| | | | | |
|-------------------------------------|--|------|------|-------------------|
| <input checked="" type="checkbox"/> | | 6500 | 6500 | 00:26:CA:1E:74:40 |
|-------------------------------------|--|------|------|-------------------|

Authentication Details

| | |
|-------------------------------|-------------------------|
| Source Timestamp | 2017-07-28 00:27:29.948 |
| Received Timestamp | 2017-07-28 00:27:29.949 |
| Policy Server | ISE22new |
| Event | 5206 PAC provisioned |
| Username | 6500 |
| Endpoint Id | 00:26:CA:1E:74:40 |
| Calling Station Id | 0026ca1e7440 |
| Authentication Identity Store | Internal CTS Devices |
| Authentication Method | dot1x |
| Authentication Protocol | EAP-FAST (EAP-MSCHAPv2) |
| Service Type | Framed |
| Network Device | 6500 |

TrustSec-data downloaden

| | | | | | |
|-------------------------------------|---|---|------|--------------|---|
| <input checked="" type="checkbox"/> |  |  | 6500 | #CTSREQUEST# |  |
| <input checked="" type="checkbox"/> |  | | 6500 | #CTSREQUEST# | |
| <input checked="" type="checkbox"/> |  | | 6500 | #CTSREQUEST# | NetworkDeviceAuthorization >> NDAC |

Authentication Details

| | |
|--------------------|---------------------------------------|
| Source Timestamp | 2017-07-28 00:28:00.73 |
| Received Timestamp | 2017-07-28 00:28:00.731 |
| Policy Server | ISE22new |
| Event | 5233 TrustSec Data Download Succeeded |
| Username | #CTSREQUEST# |
| Service Type | Outbound |
| Network Device | 6500 |
| Device Type | All Device Types |
| Location | All Locations |
| NAS IPv4 Address | 10.122.165.35 |
| Security Group | TrustSec_Devices |
| Response Time | 26 milliseconds |

Other Attributes

| | |
|--------------------------------|---|
| ConfigVersionId | 81 |
| DestinationPort | 1812 |
| Protocol | Radius |
| NetworkDeviceProfileName | Cisco |
| NetworkDeviceProfileId | b0699505-3150-4215-a80e-6753d45bf56c |
| IsThirdPartyDeviceFlow | false |
| AcsSessionId | ISE22new/290042933/391 |
| AuthorizationPolicyMatchedRule | NDAC |
| CPMSessionID | 0e248f12uRp7OyJg47Xw5P1a3ocsnKLGOWxUEIAEeOP9HaC6aEs |
| ISEPolicySetName | NetworkDeviceAuthorization |
| DTLSSupport | Unknown |
| Network Device Profile | Cisco |
| Location | Location#All Locations |
| Device Type | Device Type#All Device Types |
| IPSEC | IPSEC#Is IPSEC Device#No |
| RADIUS Username | #CTSREQUEST# |
| Device IP Address | 10.122.165.35 |
| CiscoAVPair | cts-pac-opaque=****, cts-environment-data=6500, cts-device-capability=env-data-fragment |

Result

| | |
|---------------|---|
| State | ReauthSession:0e248f12uRp7OyJg47Xw5P1a3ocsnKLGOWxUEIAEeOP9HaC6aEs |
| Class | CACS:0e248f12uRp7OyJg47Xw5P1a3ocsnKLGOWxUEIAEeOP9HaC6aEs:ISE22new/290042933/391 |
| cisco-av-pair | cts:server-list=CTSServerList1-0001 |
| cisco-av-pair | cts:security-group-tag=0002-02 |
| cisco-av-pair | cts:environment-data-expiry=86400 |
| cisco-av-pair | cts:security-group-table=0001-17 |

Result

| | |
|---------------|---|
| Class | CACS:0e248f12uRp7Oyjg47Xw5P1a3ocsnKLGOWxUEIAEeOP9HaC6aEs:ISE22new/290042933/392 |
| cisco-av-pair | cts:server-list=CTSServerList1-0001 |
| cisco-av-pair | cts:server=6f5719523570b8d229f23073404e2d37:14.36.143.18:1812 |

Result

| | |
|---------------|---|
| Class | CACS:0e248f12uRp7Oyjg47Xw5P1a3ocsnKLGOWxUEIAEeOP9HaC6aEs:ISE22new/290042933/393 |
| cisco-av-pair | cts:security-group-table=0001-17 |
| cisco-av-pair | cts:security-group-info=0-0-00-Unknown |
| cisco-av-pair | cts:security-group-info=ffff-1-00-ANY |
| cisco-av-pair | cts:security-group-info=9-0-00-Auditors |
| cisco-av-pair | cts:security-group-info=f-0-00-BYOD |
| cisco-av-pair | cts:security-group-info=5-0-00-Contractors |
| cisco-av-pair | cts:security-group-info=8-0-00-Developers |
| cisco-av-pair | cts:security-group-info=c-0-00-Development_Servers |
| cisco-av-pair | cts:security-group-info=4-0-00-Employees |
| cisco-av-pair | cts:security-group-info=6-2-00-Guests |
| cisco-av-pair | cts:security-group-info=3-0-00-Network_Services |
| cisco-av-pair | cts:security-group-info=e-0-00-PCI_Servers |
| cisco-av-pair | cts:security-group-info=a-0-00-Point_of_Sale_Systems |
| cisco-av-pair | cts:security-group-info=b-0-00-Production_Servers |
| cisco-av-pair | cts:security-group-info=7-0-00-Production_Users |
| cisco-av-pair | cts:security-group-info=ff-0-00-Quarantined_Systems |
| cisco-av-pair | cts:security-group-info=d-0-00-Test_Servers |
| cisco-av-pair | cts:security-group-info=2-2-00-TrustSec_Devices |

Configuratie zonder zaad (3560X)

TrustSec Credentials

```
3560X#cts credentials id 3560X password Cisc0123
```

AAA configuration

```
3560X(config)#aaa new-model
3560X(config)#aaa authentication dot1x default group radius
3560X(config)#aaa authorization network default group radius
3560X(config)#aaa accounting identity default start-stop group radius
```

Recognize and use vendor-specific attributes

```
3560X(config)#radius-server vsa send authentication
```

Enable Change of Authorization

```
3560X(config)#aaa server radius dynamic-author
3560X(config-locsvr-da-radius)#client 14.36.143.18 server-key Cisc0123
```

Enable 802.1X

```
3560X(config)#dot1x system-auth-control
```

Switchport TrustSec Configuration

```
3560X(config)#int gi0/24
3560X(config-if)#switchport trunk encapsulation dot1q
3560X(config-if)#switchport mode trunk
3560X(config-if)#cts dot1x
3560X(config-if-cts-dot1x)#sap mode-list null
3560X(config-if-cts-dot1x)#propagate sgt
```

Verificatie

Pac Download

```
3560X#show cts pac
```

```
AID: 6F5719523570B8D229F23073404E2D37
PAC-Info:
  PAC-type = Cisco Trustsec
  AID: 6F5719523570B8D229F23073404E2D37
  I-ID: 3560X
  A-ID-Info: ISE 2.2p1
  Credential Lifetime: 05:32:57 UTC Oct 26 2017
PAC-Opaque:
000200B000030001000400106F5719523570B8D229F23073404E2D3700060094000301009F9B0624C0A0C5D2AFDAAE89
C173D34300000013597A55C100093A8059F0E1A3FAF83A2B7C8332479B7324C0B224F18D8654C2DB14544B58296A0A97
C7B52EB1B7C0725776FE16F715094AC8A766E1F6D16A2A151B70632D6EAB34C5E1874409779FADA53F5892AD4ACC3533
B5A61F89D028C076D94B52744A328C23437306AF428162AC680742003C6BDDDB207A08F57
Refresh timer is set for 11y42w
```

Environment Data

```
3560X#show cts environment-data
```

```
CTS Environment Data
=====
Current state = COMPLETE
Last status = Successful
Local Device SGT:
  SGT tag = 2-02:TrustSec_Devices
Server List Info:
Installed list: CTSServerList1-0001, 1 server(s):
  *Server: 14.36.143.18, port 1812, A-ID 6F5719523570B8D229F23073404E2D37
    Status = ALIVE
    auto-test = TRUE, keywrap-enable = FALSE, idle-time = 60 mins, deadtime = 20 secs
Multicast Group SGT Table:
Security Group Name Table:
  0-d1:Unknown
  2-d1:TrustSec_Devices
```

3-d1:Network_Services
4-d1:Employees
5-d1:Contractors
6-d1:Guests
7-d1:Production_Users
8-d1:Developers
9-d1:Auditors
10-d1:Point_of_Sale_Systems
11-d1:Production_Servers
12-d1:Development_Servers
13-d1:Test_Servers
14-d1:PCI_Servers
15-d1:BYOD
255-d1:Quarantined_Systems

Environment Data Lifetime = 86400 secs

Last update time = 02:41:21 UTC Mon Jan 2 2006

Env-data expires in 0:23:56:36 (dd:hr:mm:sec)

Env-data refreshes in 0:23:56:36 (dd:hr:mm:sec)

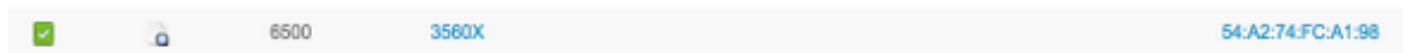
Cache data applied = NONE

State Machine is running

ISE Live Logs

Operations > RADIUS > Live Logs

PAC-bevoorrading



Authentication Details

| | |
|-------------------------------|--------------------------|
| Source Timestamp | 2017-07-28 01:32:57.707 |
| Received Timestamp | 2017-07-28 01:32:57.708 |
| Policy Server | ISE22new |
| Event | 5206 PAC provisioned |
| Username | 3560X |
| Endpoint Id | 54:A2:74:FC:A1:98 |
| Calling Station Id | 54-A2-74-FC-A1-98 |
| Authentication Identity Store | Internal CTS Devices |
| Audit Session Id | 0A7AA523000000100094C0F0 |
| Authentication Method | dot1x |
| Authentication Protocol | EAP-FAST (EAP-MSCHAPv2) |
| Service Type | Framed |
| Network Device | 6500 |

CiscoAVPair

```
cts-pac-opaque=****,  
service-type=Framed,  
cts-capabilities=sap,  
audit-session-id=0A7AA523000000100094C0F0,  
method=dot1x
```

Niet-gezuiverde verificatie




6500

3560X

NetworkDeviceAuthorization >> NDAC

54:A2:74:FC:A1:98

Overview

| | |
|----------------------|---|
| Event | 5200 Authentication succeeded |
| Username | 3560X |
| Endpoint Id | 54:A2:74:FC:A1:98  |
| Endpoint Profile | |
| Authorization Policy | NetworkDeviceAuthorization >> NDAC |
| Authorization Result | Permit Access |

Result

| | |
|------------------|--|
| User-Name | 3560X |
| State | ReauthSession:0A7AA523000000110094D88C |
| Class | CACS:0A7AA523000000110094D88C:ISE22new/290042933/396 |
| Session-Timeout | 86400 milliseconds |
| EAP-Key-Name | 2b:90:51:10:6d:f0:fd:04:12:07:b1:ea:37:dd:a8:e7:f1:d3:9f:59:49:eb:3b:6d:fe:f4:bb:7c:f9:f5:2c:df:b6:e8:55:7b:cc:84:7c:fa:3a:86:be:a6:c7:93:63:96:03:57:c5:a4:46:bb:e0:19:e9:be:95:b4:37:12:f2:db:ae |
| cisco-av-pair | cts:security-group-tag=0002-02 |
| cisco-av-pair | cts:supplicant-cts-capabilities=sap |
| MS-MPPE-Send-Key | **** |
| MS-MPPE-Recv-Key | **** |

Downloaden van wederzijds peer-beleid

| | | | | |
|---|---|-------|-----------------------------------|------------------------------------|
|  |  | 3560X | #CTSDEVICE#-6500 | NetworkDeviceAuthorization >> NDAC |
|  |  | 6500 | #CTSDEVICE#-3560X | NetworkDeviceAuthorization >> NDAC |

Overview

| | |
|----------------------|--|
| Event | 5234 TrustSec Peer Policy Download Succeeded |
| Username | #CTSDEVICE#-3560X |
| Endpoint Id | |
| Endpoint Profile | |
| Authorization Policy | NetworkDeviceAuthorization >> NDAC |
| Authorization Result | |

Result

| | |
|---------------|---|
| State | ReauthSession:0e248f12oMzxY0d6I0OEZ/u3aFQs2AoZYPCddb7dJCSi7yoNlwg |
| Class | CACS:0e248f12oMzxY0d6I0OEZ/u3aFQs2AoZYPCddb7dJCSi7yoNlwg:ISE22new/290042933/397 |
| cisco-av-pair | cts:trusted-device=true |
| cisco-av-pair | cts:security-group-tag=0002-02 |
| cisco-av-pair | cts:authorization-expiry=86400 |




Overview

| | |
|----------------------|--|
| Event | 5234 TrustSec Peer Policy Download Succeeded |
| Username | #CTSDEVICE#-6500 |
| Endpoint Id | |
| Endpoint Profile | |
| Authorization Policy | NetworkDeviceAuthorization >> NDAC |
| Authorization Result | |

Result

| | |
|---------------|---|
| State | ReauthSession:0e248f122xsxXRQJut5/BzqahPizdpEcb22WZ6zPRPmu0Ms03Bo |
| Class | CACS:0e248f122xsxXRQJut5/BzqahPizdpEcb22WZ6zPRPmu0Ms03Bo:ISE22new/290042933/399 |
| cisco-av-pair | cts:trusted-device=true |
| cisco-av-pair | cts:security-group-tag=0002-02 |
| cisco-av-pair | cts:authorization-expiry=86400 |

TrustSec-data downloaden

| | | | | |
|-------------------------------------|---|-------|--------------|------------------------------------|
| <input checked="" type="checkbox"/> |  | 3560X | #CTSREQUEST# | |
| <input checked="" type="checkbox"/> |  | 3560X | #CTSREQUEST# | |
| <input checked="" type="checkbox"/> |  | 3560X | #CTSREQUEST# | NetworkDeviceAuthorization >> NDAC |

Overview

| | |
|----------------------|---------------------------------------|
| Event | 5233 TrustSec Data Download Succeeded |
| Username | #CTSREQUEST# |
| Endpoint Id | |
| Endpoint Profile | |
| Authorization Policy | NetworkDeviceAuthorization >> NDAC |
| Authorization Result | |

Result

| | |
|---------------|---|
| State | ReauthSession:0e248f12IVQjPrZ3n038zkt2xhOYWXRJhCAjw_hXw5UAJbMvsLY |
| Class | CACS:0e248f12IVQjPrZ3n038zkt2xhOYWXRJhCAjw_hXw5UAJbMvsLY:ISE22new/290042933/398 |
| cisco-av-pair | cts:server-list=CTSServerList1-0001 |
| cisco-av-pair | cts:security-group-tag=0002-02 |
| cisco-av-pair | cts:environment-data-expiry=86400 |
| cisco-av-pair | cts:security-group-table=0001-17 |

Result

| | |
|---------------|---|
| Class | CACS:0e248f12IVQjPrZ3n038zkt2xhOYWXRJhCAjw_hXw5UAJbMvsLY:ISE22new/290042933/400 |
| cisco-av-pair | cts:server-list=CTSServerList1-0001 |
| cisco-av-pair | cts:server=6f5719523570b8d229f23073404e2d37:14.36.143.18:1812 |

Result

| | |
|---------------|---|
| Class | CACS:0e248f12IVQjPrZ3n038zkt2xhOYWXRJhCAjw_hXw5UAJbMvsLY:ISE22new/290042933/401 |
| cisco-av-pair | cts:security-group-table=0001-17 |
| cisco-av-pair | cts:security-group-info=0-0-00-Unknown |
| cisco-av-pair | cts:security-group-info=ffff-1-00-ANY |
| cisco-av-pair | cts:security-group-info=9-0-00-Auditors |
| cisco-av-pair | cts:security-group-info=f-0-00-BYOD |
| cisco-av-pair | cts:security-group-info=5-0-00-Contractors |
| cisco-av-pair | cts:security-group-info=8-0-00-Developers |
| cisco-av-pair | cts:security-group-info=c-0-00-Development_Servers |
| cisco-av-pair | cts:security-group-info=4-0-00-Employees |
| cisco-av-pair | cts:security-group-info=6-2-00-Guests |
| cisco-av-pair | cts:security-group-info=3-0-00-Network_Services |
| cisco-av-pair | cts:security-group-info=e-0-00-PCI_Servers |
| cisco-av-pair | cts:security-group-info=a-0-00-Point_of_Sale_Systems |
| cisco-av-pair | cts:security-group-info=b-0-00-Production_Servers |
| cisco-av-pair | cts:security-group-info=7-0-00-Production_Users |
| cisco-av-pair | cts:security-group-info=ff-0-00-Quarantined_Systems |
| cisco-av-pair | cts:security-group-info=d-0-00-Test_Servers |
| cisco-av-pair | cts:security-group-info=2-2-00-TrustSec_Devices |

Interface-verificatie

Seed (6500)

```
6500#show cts interface gi6/1
Global Dot1x feature is Enabled
Interface GigabitEthernet6/1:
  CTS is enabled, mode:      DOT1X
  IFC state:                 OPEN
  Interface Active for 00:38:50.744
  Authentication Status:    SUCCEEDED
    Peer identity:          "3560X"
    Peer's advertised capabilities: "sap"
    802.1X role:           Authenticator
  Authorization Status:    SUCCEEDED
```

```
Peer SGT:                2:TrustSec_Devices
Peer SGT assignment: Trusted
SAP Status:              SUCCEEDED
Dot1x Info for GigabitEthernet6/1
-----
PAE                        = AUTHENTICATOR
```

Non-Seed (3560X)

```
3560X#show cts interface gi0/24
```

```
Global Dot1x feature is Enabled
```

```
Interface GigabitEthernet0/24:
```

```
CTS is enabled, mode:    DOT1X
```

```
IFC state:              OPEN
```

```
Interface Active for 00:08:51.317
```

```
Authentication Status:  SUCCEEDED
```

```
Peer identity:         "6500"
```

```
Peer's advertised capabilities: "sap"
```

```
802.1X role:          Supplicant
```

```
Reauth period applied to link: Not applicable to Supplicant role
```

```
Authorization Status:  SUCCEEDED
```

```
Peer SGT:              2:TrustSec_Devices
```

```
Peer SGT assignment: Trusted
```

```
SAP Status:            SUCCEEDED
```

```
Version:               2
```

```
Dot1x Info for GigabitEthernet0/24
```

```
-----
PAE                        = SUPPLICANT
```