

# Configure WSA Integration with ISE for TrustSec Aware Services



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## Introduction

This document describes how to integrate the Web Security Appliance (WSA) with Identity Services Engine (ISE). ISE Version 1.3 supports a new API called pxGrid. This modern and flexible protocol supports authentication, encryption, and privileges (groups) which allows for easy integration with other security solutions.

WSA Version 8.7 supports pxGrid protocol and is able to retrieve context identity information from ISE. As a result, WSA allows you to build policies based on TrustSec Security Group Tag (SGT) groups retrieved from ISE.

# Prerequisites

## Requirements

Cisco recommends that you have experience with Cisco ISE configuration and basic knowledge of these topics:

- ISE deployments and authorization configuration
- Adaptive Security Appliance (ASA) CLI configuration for TrustSec and VPN access
- WSA configuration
- Basic understanding of TrustSec deployments

## Components Used

The information in this document is based on these software and hardware versions:

- Microsoft Windows 7
- Cisco ISE Software Version 1.3 and later
- Cisco AnyConnect Mobile Security Version 3.1 and later
- Cisco ASA Version 9.3.1 and later
- Cisco WSA Version 8.7 and later

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

## Configure

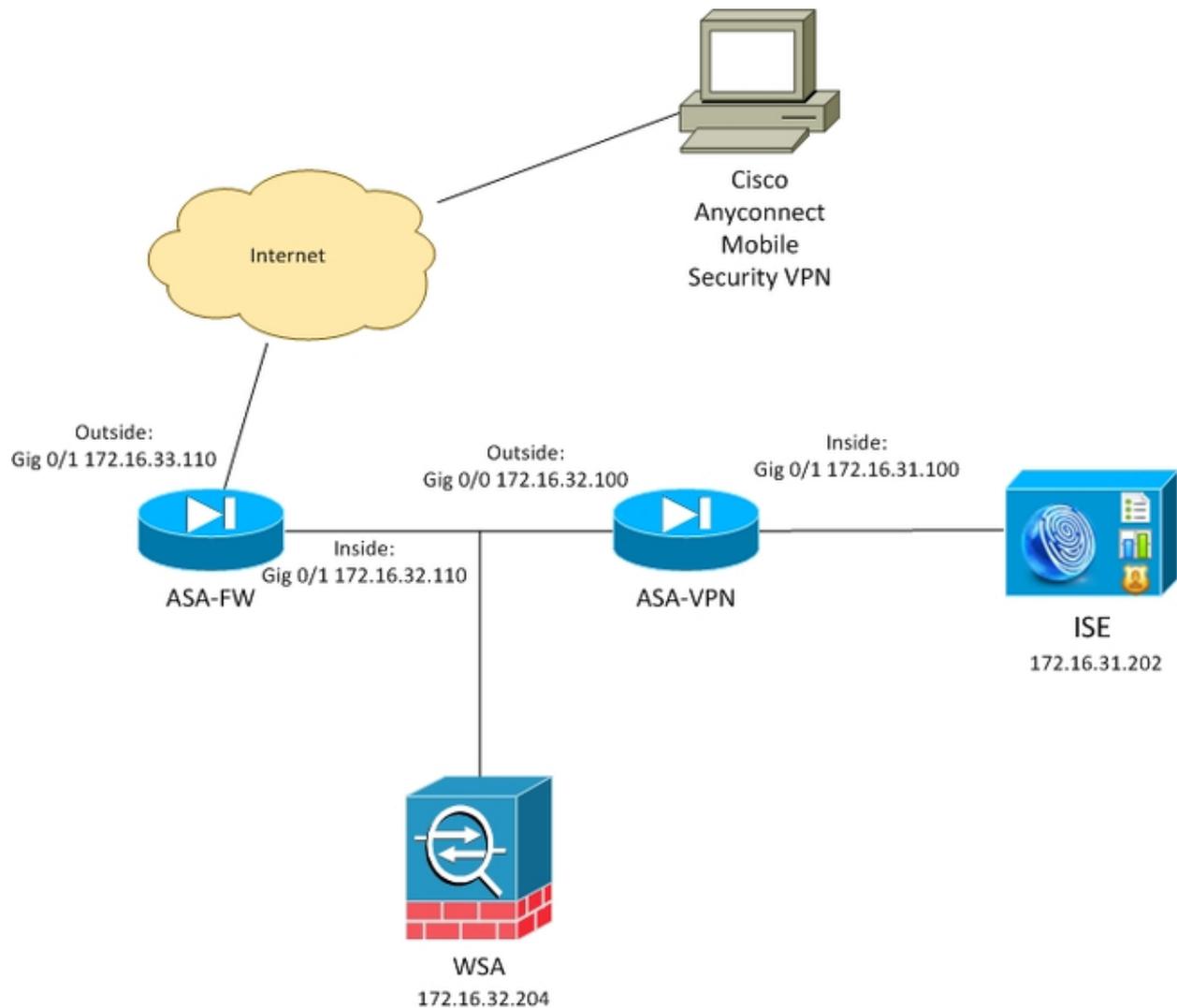
**Note:** Use the Command Lookup Tool (registered customers only) in order to obtain more information on the commands used in this section.

## Network Diagram and Traffic Flow

TrustSec SGT tags are assigned by ISE used as an authentication server for all types of users that access the corporate network. This involves wired/wireless users that authenticate via 802.1x or ISE guest portals. Also, remote VPN users that use ISE for authentication.

For WSA, it does not matter how the user has accessed the network.

This example presents a remote VPN users terminating session on the ASA-VPN. Those users have been assigned a specific SGT tag. All HTTP traffic to the Internet will be intercepted by the ASA-FW (firewall) and redirected to the WSA for inspection. The WSA uses the identity profile which allows it to classify users based on the SGT tag and build access or decryption policies based on that.



The detailed flow is:

1. The AnyConnect VPN user terminates the Secure Sockets Layer (SSL) session on the ASA-VPN. The ASA-VPN is configured for TrustSec and uses ISE for authentication of VPN users. The authenticated user is assigned a SGT tag value = 2 (name = IT). The user receives an IP address from the 172.16.32.0/24 network (172.16.32.50 in this example).
2. The user tries to access the web page in the Internet. The ASA-FW is configured for Web Cache Communication Protocol (WCCP) which redirects traffic to the WSA.
3. The WSA is configured for ISE integration. It uses pxGrid in order to download information from the ISE: user IP address 172.16.32.50 has been assigned SGT tag 2.
4. The WSA processes the HTTP request from the user and hits access policy PolicyForIT. That policy is configured to block traffic to the sports sites. All other users (which do not belong to SGT 2) hit the default access policy and have full access to the sports sites.

## ASA-VPN

This is a VPN gateway configured for TrustSec. Detailed configuration is out of scope of this document. Refer to these examples:

- ASA and Catalyst 3750X Series Switch TrustSec Configuration Example and Troubleshoot Guide
- ASA Version 9.2 VPN SGT Classification and Enforcement Configuration Example

## ASA-FW

The ASA firewall is responsible for WCCP redirection to the WSA. This device is not aware of TrustSec.

```
interface GigabitEthernet0/0
 nameif outside
 security-level 100
 ip address 172.16.33.110 255.255.255.0
```

```
interface GigabitEthernet0/1
 nameif inside
 security-level 100
 ip address 172.16.32.110 255.255.255.0
```

```
access-list wccp-routers extended permit ip host 172.16.32.204 any
access-list wccp-redirect extended deny tcp any host 172.16.32.204
access-list wccp-redirect extended permit tcp any any eq www
access-list wccp-redirect extended permit tcp any any eq https
```

```
wccp 90 redirect-list wccp-redirect group-list wccp-routers
wccp interface inside 90 redirect in
```

## ISE

ISE is a central point in the TrustSec deployment. It assigns SGT tags to all users that access and authenticate to the network. Steps required for basic configuration are listed in this section.

### Step 1. SGT for IT and Other Group

Choose **Policy > Results > Security Group Access > Security Groups** and create the SGT:

The screenshot displays the Cisco Identity Services Engine (ISE) web interface. The top navigation bar includes the Cisco logo, the text "Identity Services Engine", and a "Home" button. Below the navigation bar are tabs for "Authentication", "Authorization", "Profiling", "Posture", and "Client Provisioning". The "Results" tab is currently selected. The main content area is divided into two sections. On the left, a "Results" sidebar shows a tree view of the configuration hierarchy, with "Security Groups" under "TrustSec" selected. On the right, the "Security Groups" configuration page is shown, featuring a table of existing groups and a list of actions (Edit, Add, Import, Export).

	Name	SGT (Dec / Hex)
<input type="checkbox"/>	IT	2/0002
<input type="checkbox"/>	Marketing	3/0003
<input type="checkbox"/>	Unknown	0/0000

## Step 2. Authorization Rule for VPN Access That Assigns SGT = 2 (IT)

Choose **Policy > Authorization** and create a rule for remote VPN access. All VPN connections established via ASA-VPN will get full access (PermitAccess) and will be assigned SGT tag 2 (IT).

The screenshot shows the Cisco Identity Services Engine (ISE) interface. The top navigation bar includes Home, Operations, Policy, Guest Access, and Administration. The main menu has Authentication, Authorization (selected), Profiling, Posture, Client Provisioning, TrustSec, and Policy Elements. The page title is "Authorization Policy". Below the title, there is a description: "Define the Authorization Policy by configuring rules based on identity groups and/or other conditions. Drag and drop rules to change the order. For Policy Export go to Administration > System > Backup & Restore > Policy Export Page". A dropdown menu shows "First Matched Rule Applies". Below this, there is a section for "Exceptions (0)" with a "Standard" tab. A table lists the authorization rules:

Status	Rule Name	Conditions (identity groups and other conditions)	Permissions
<input checked="" type="checkbox"/>	ASA-VPN	if DEVICE.Device Type EQUALS All Device Types#ASA-VPN	then PermitAccess AND IT

## Step 3. Add Network Device and Generate PAC File for ASA-VPN

In order to add the ASA-VPN to the TrustSec domain, it is necessary to generate the proxy Auto Config (PAC) file manually. That file will be imported on the ASA.

That can be configured from **Administration > Network Devices**. After the ASA is added, scroll down to TrustSec settings and generate the PAC file. The details for that are described in a separate (referenced) document.

## Step 4. Enable pxGrid Role

Choose **Administration > Deployment** in order to enable the pxGrid role.

The screenshot shows the Cisco Identity Services Engine (ISE) interface for the "Deployment" section. The top navigation bar includes Home, Operations, Policy, Guest Access, and Administration. The main menu has System, Identity Management, Network Resources, Device Portal Management, pxGrid Services, and Feed Service. The sub-menu has Deployment (selected), Licensing, Certificates, Logging, Maintenance, Backup & Restore, Admin Access, and Settings. The page title is "Deployment Nodes List > ise14". The main content area is titled "Edit Node" and has two tabs: "General Settings" (selected) and "Profiling Configuration". The "General Settings" tab shows the following information:

- Hostname: ise14
- FQDN: ise14.example.com
- IP Address: 172.16.31.202
- Node Type: Identity Services Engine (ISE)

Below this, there is a section for "Personas" with the following settings:

- Administration: Role STANDALONE, Make Primary button
- Monitoring: Role PRIMARY, Other Monitoring Node button
- Policy Service
  - Enable Session Services
    - Include Node in Node Group: None
  - Enable Profiling Service
- pxGrid

## Step 5. Generate the Certificate for Administration and the pxGrid Role

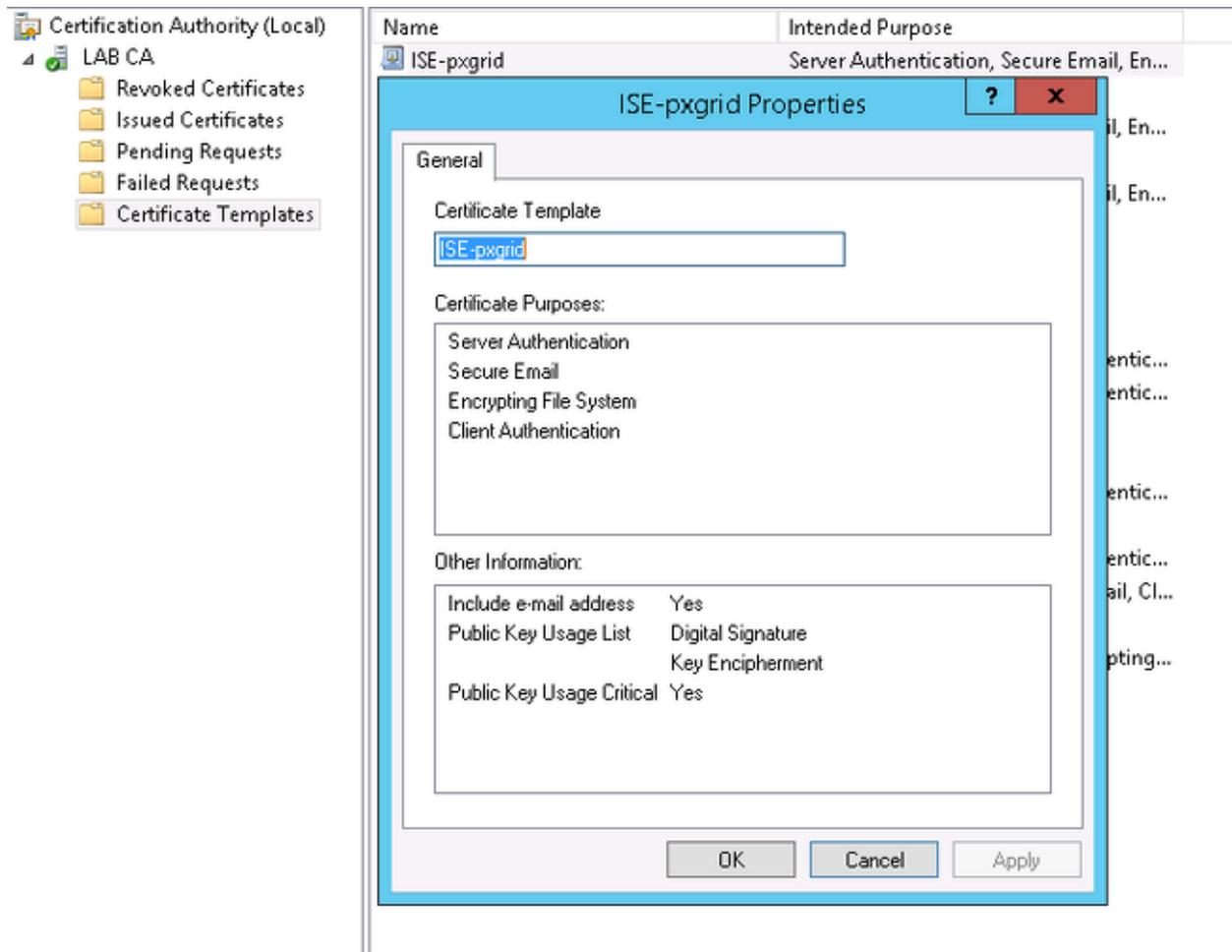
The pxGrid protocol uses certificate authentication for both the client and the server. It is very important to configure the correct certificates for both ISE and the WSA. Both certificates should include the Fully Qualified Domain Name (FQDN) in the Subject and x509 extensions for Client Authentication and Server Authentication. Also, make sure the correct DNS A record is created for both ISE and the WSA and matches the corresponding FQDN.

If both certificates are signed by a different Certificate Authority (CA), it is important to include those CAs in the trusted store.

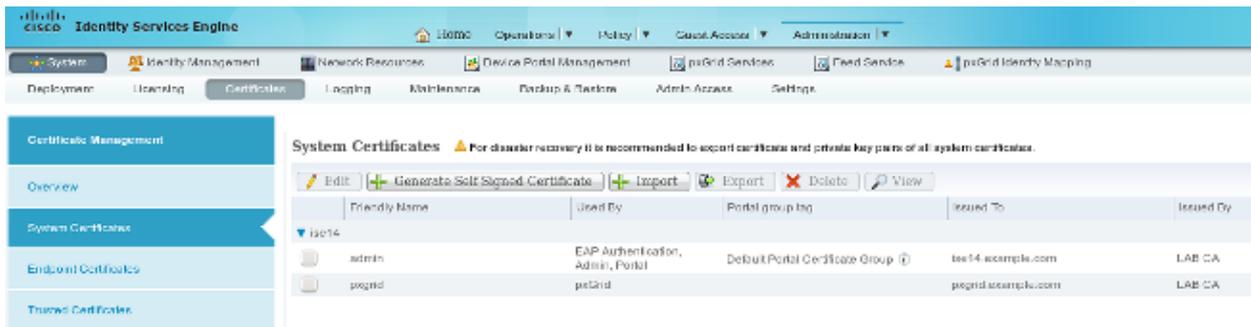
In order to configure certificates, choose **Administration > Certificates**.

ISE can generate a certificate signing request (CSR) for each role. For the pxGrid role, export and sign the CSR with an external CA.

In this example, the Microsoft CA has been used with this template:



The end result might look like:

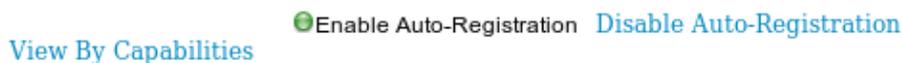


Do not forget to create DNS A records for ise14.example.com and pxgrid.example.com that point to 172.16.31.202.

## Step 6. pxGrid Auto Registration

By default, ISE will not automatically register pxGrid subscribers. That should be manually approved by the administrator. That setting should be changed for WSA integration.

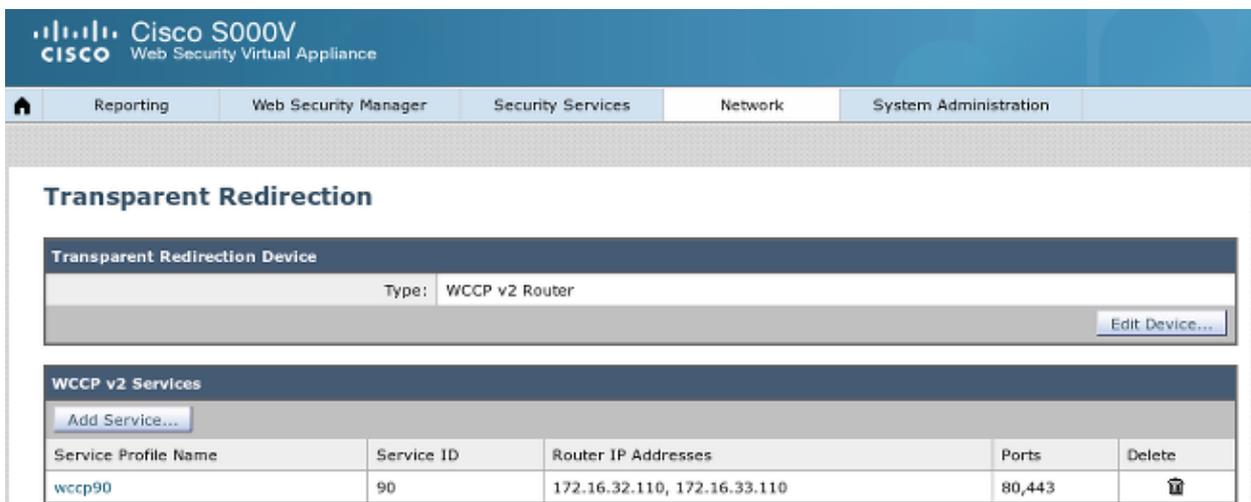
Choose **Administration > pxGrid Services** and set **Enable Auto-Registration**.



## WSA

### Step 1. Transparent Mode and Redirection

In this example, the WSA is configured with just the management interface, transparent mode, and redirection from the ASA:



### Step 2. Certificate Generation

The WSA needs to trust the CA to sign all certificates. Choose **Network > Certificate Management** in order to add a CA certificate:

Cisco S000V  
Web Security Virtual Appliance

Reporting Web Security Manager Security Services Network System Administration

### Manage Trusted Root Certificates

**Custom Trusted Root Certificates**

Import...

Trusted root certificates are used to determine whether HTTPS sites' signing certificates should be trusted based on their chain of certificate authorities. Certificates imported here are added to the trusted root certificate list. Add certificates to this list in order to trust certificates with signing authorities not recognized on the Cisco list.

Certificate	Expiration Date	On Cisco List	Delete
LAB CA	Feb 12 07:48:12 2025 GMT	No	

Cancel Submit

It is also necessary to generate a certificate the WSA will use in order to authenticate to pxGrid. Choose **Network > Identity Services Engine > WSA Client certificate** in order to generate the CSR, sign it with the correct CA template (ISE-pxgrid), and import it back.

Also, for "ISE Admin Certificate" and "ISE pxGrid Certificate", import the CA certificate (in order to trust the pxGrid certificate presented by ISE):

Cisco S000V  
Web Security Virtual Appliance

Reporting Web Security Manager Security Services Network System Administration

### Identity Services Engine

**Identity Services Engine Settings**

ISE Server:	172.16.31.202
WSA Client Certificate:	Using Generated Certificate: Common name: wsa.example.com Organization: TAC Organizational Unit: Krakow Country: PL Expiration Date: May 5 15:57:36 2016 GMT Basic Constraints: Not Critical
ISE Admin Certificate:	Common name: LAB CA Organization: Organizational Unit: Country: Expiration Date: Feb 12 07:48:12 2025 GMT Basic Constraints: Critical
ISE PxGrid Certificate:	Common name: LAB CA Organization: Organizational Unit: Country: Expiration Date: Feb 12 07:48:12 2025 GMT Basic Constraints: Critical

Edit Settings...

### Step 3. Test ISE Connectivity

Choose **Network > Identity Services Engine** in order to test the connection to ISE:

## Test Communication with ISE Server

Start Test

Checking connection to ISE PxGrid server...  
Success: Connection to ISE PxGrid server was successful. Retrieved 4 SGTs

Checking connection to ISE REST server...  
Success: Connection to ISE REST server was successful.

Test completed successfully.

### Step 4. ISE Identification Profiles

Choose **Web Security Manager > Identification profiles** in order to add a new profile for ISE. For "Identification and Authentication" use "Transparently identify users with ISE".

The screenshot shows the Cisco S000V Web Security Virtual Appliance interface. The top navigation bar includes 'Reporting', 'Web Security Manager', 'Security Services', 'Network', and 'System Administration'. The main content area is titled 'Identification Profiles' and contains a table of 'Client / User Identification Profiles'. The table has columns for Order, Transaction Criteria, Authentication / Identification Decision, End-User Acknowledgement, and Delete. There are two rows: one for an ISE profile and one for a Global Identification Profile.

Order	Transaction Criteria	Authentication / Identification Decision	End-User Acknowledgement	Delete
1	<b>ISE</b> Protocols: HTTP/HTTPS	Identify Users Transparently: Identity Services Engine Guest privileges for users failing transparent user identification	(global profile)	
	<b>Global Identification Profile</b>	Exempt from Authentication / User Identification	Not Available	

### Step 5. Access the Policy Based on the SGT Tag

Choose **Web Security Manager > Access Policies** in order to add a new policy. Membership uses the ISE profile:

### Access Policy: PolicyForIT

**Policy Settings**

**Enable Policy**

Policy Name:   
(e.g. my IT policy)

Description:

Insert Above Policy:

**Policy Member Definition**

*Membership is defined by the combination of the following options. All criteria must be met for the policy to take effect.*

Identification Profiles and Users:

Identification Profile	Authorized Users and Groups	<a href="#">Add Identification Profile</a>
<input type="text" value="ISE"/>	<input type="radio"/> All Authenticated Users <input checked="" type="radio"/> Selected Groups and Users <small>?</small> ISE Secure Group Tags: IT Users: No users entered <input type="radio"/> Guests (users failing authentication)	

For Selected Groups and Users the SGT tag 2 will be added (IT):

## Access Policies: Policy "PolicyForIT": Edit Secure Group Tags

**Authorized Secure Group Tags**

Use the search function below to add Secure Group Tags. To remove Secure Group Tags from this policy, use the Delete option.

1 Secure Group Tag(s) currently included in this policy.

Secure Group Tag Name	SGT Number	SGT Description	Delete
IT	2	__NONE__	<input type="checkbox"/> All

[Delete](#)

**Secure Group Tag Search**

Enter any text to search for a Secure Group Tag name, number, or description. Select one or more Secure Group Tags from the list and use the Add button to add to this policy.

Search

0 Secure Group Tag(s) selected for Add [Add](#)

Secure Group Tag Name	SGT Number	SGT Description	Select
Unknown	0	Unknown Security Group	<input type="checkbox"/> All
Marketing	3	__NONE__	<input type="checkbox"/>
IT	2	__NONE__	<input type="checkbox"/>
ANY	85535	Any Security Group	<input type="checkbox"/>

The policy denies access to all sports sites for users which belong to SGT IT:

## Access Policies

**Policies**

[Add Policy...](#)

Order	Group	Protocols and User Agents	URL Filtering	Applications	Objects	Anti-Malware and Reputation	Delete
1	<b>PolicyForIT</b> Identification Profile: ISE 1 tag (IT)	(global policy)	Block: 2 Monitor: 78	(global policy)	(global policy)	(global policy)	
	<b>Global Policy</b> Identification Profile: All	No blocked items	Monitor: 79	Monitor: 377	No blocked items	Web Reputation: Enabled Anti-Malware Scanning: Disabled	

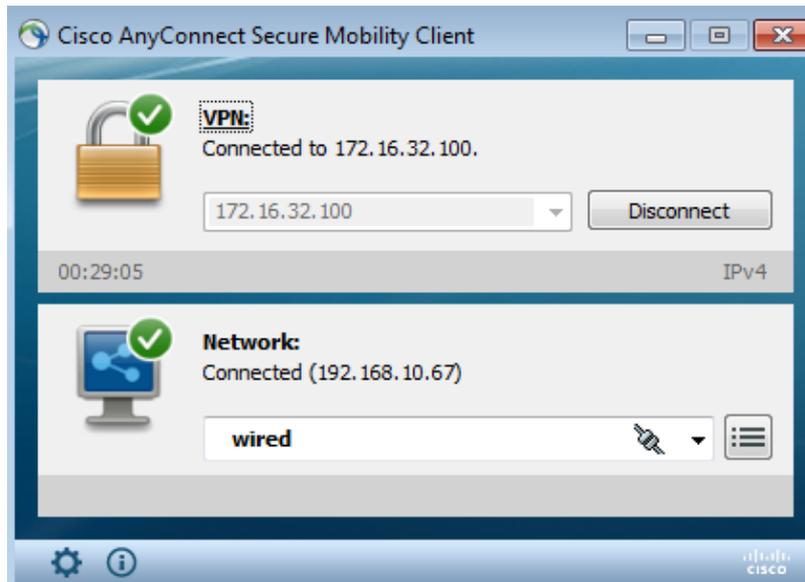
[Edit Policy Order...](#)

## Verify

Use this section in order to confirm that your configuration works properly.

## Step 1. VPN Session

The VPN user initiates a VPN session towards the ASA-VPN:



The ASA-VPN uses ISE for authentication. ISE creates a session and assigns the SGT tag 2 (IT):

Initiated	Updated	Session Status	CoA Action	Endpoint ID	Identity	IP Address	Security Group
2015-05-06 19:17:50...	2015-05-06 19:17:55...	Started		192.168.10.67	cisco	172.16.32.50	IT

After successful authentication, the ASA-VPN creates a VPN session with the SGT tag 2 (returned in Radius Access-Accept in cisco-av-pair):

```
asa-vpn# show vpn-sessiondb anyconnect
```

```
Session Type: AnyConnect
```

```
Username       : cisco                               Index        : 2
Assigned IP    : 172.16.32.50                         Public IP     : 192.168.10.67
Protocol       : AnyConnect-Parent SSL-Tunnel DTLS-Tunnel
License        : AnyConnect Essentials
Encryption     : AnyConnect-Parent: (1)none SSL-Tunnel: (1)RC4 DTLS-Tunnel: (1)AES128
Hashing        : AnyConnect-Parent: (1)none SSL-Tunnel: (1)SHA1 DTLS-Tunnel: (1)SHA1
Bytes Tx       : 12979961                             Bytes Rx      : 1866781
Group Policy   : POLICY                               Tunnel Group  : SSLVPN
Login Time     : 21:13:26 UTC Tue May 5 2015
Duration       : 6h:08m:03s
Inactivity     : 0h:00m:00s
VLAN Mapping   : N/A                                VLAN          : none
Audt Sess ID   : ac1020640000200055493276
Security Grp  : 2:IT
```

Since the link between the ASA-VPN and the ASA-FW is not TrustSec enabled, the ASA-VPN sends untagged frames for that traffic (would not be able to GRE encapsulate Ethernet frames with the

CMD/TrustSec field injected).

## Step 2. Session Information Retrieved by the WSA

At this stage, the WSA should receive the mapping between the IP address, username, and SGT (via pxGrid protocol):

```
wsa.example.com> isedata

Choose the operation you want to perform:
- STATISTICS - Show the ISE server status and ISE statistics.
- CACHE - Show the ISE cache or check an IP address.
- SGTs - Show the ISE Secure Group Tag (SGT) table.
[ ]> CACHE

Choose the operation you want to perform:
- SHOW - Show the ISE ID cache.
- CHECKIP - Query the local ISE cache for an IP address
[ ]> SHOW

IP                Name                SGT#
172.16.32.50      cisco                2

Choose the operation you want to perform:
- SHOW - Show the ISE ID cache.
- CHECKIP - Query the local ISE cache for an IP address
[ ]> █
```

## Step 3. Traffic Redirection to the WSA

The VPN user initiates a connection to sport.pl, which is intercepted by the ASA-FW:

```
asa-fw# show wccp

Global WCCP information:
  Router information:
    Router Identifier:      172.16.33.110
    Protocol Version:      2.0

  Service Identifier: 90
    Number of Cache Engines: 1
    Number of routers: 1
    Total Packets Redirected: 562
    Redirect access-list:  wccp-redirect
    Total Connections Denied Redirect: 0
    Total Packets Unassigned: 0
    Group access-list:    wccp-routers
    Total Messages Denied to Group: 0
    Total Authentication failures: 0
    Total Bypassed Packets Received: 0

asa-fw# show access-list wccp-redirect
access-list wccp-redirect; 3 elements; name hash: 0x9bab8633
access-list wccp-redirect line 1 extended deny tcp any host 172.16.32.204 (hitcnt=0)
0xfd875b28
```

```
access-list wccp-redirect line 2 extended permit tcp any any eq www (hitcnt=562)
0x028ab2b9
access-list wccp-redirect line 3 extended permit tcp any any eq https (hitcnt=0)
0xe202a11e
```

and tunneled in GRE to the WSA (notice that the WCCP router-id is the highest IP address configured):

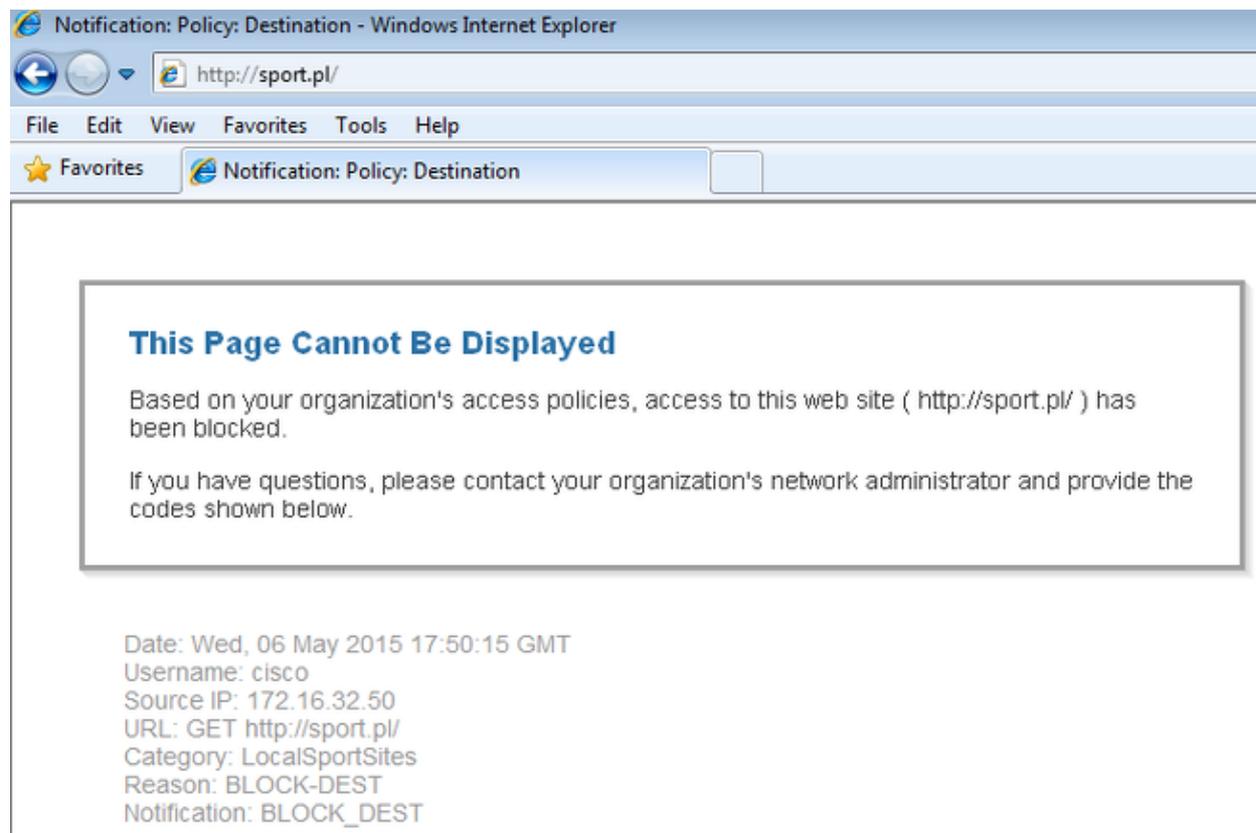
```
asa-fw# show capture
capture CAP type raw-data interface inside [Capturing - 70065 bytes]
match gre any any
```

```
asa-fw# show capture CAP
```

525 packets captured

```
1: 03:21:45.035657      172.16.33.110 > 172.16.32.204: ip-proto-47, length 60
2: 03:21:45.038709      172.16.33.110 > 172.16.32.204: ip-proto-47, length 48
3: 03:21:45.039960      172.16.33.110 > 172.16.32.204: ip-proto-47, length 640
```

The WSA continues the TCP handshake and processes the GET request. As a result, the policy named PolicyForIT is hit and traffic is blocked:



That is confirmed by the WSA Report:

**Cisco S000V**  
Web Security Virtual Appliance

Reporting | Web Security Manager | Security Services | Network | System Administration

## Web Tracking

Search

Proxy Services | L4 Traffic Monitor | SOCKS Proxy

Available: 06 May 2015 11:22 to 06 May 2015 18:02 (GMT +00:00)

Time Range: Hour

User/Client IPv4 or IPv6: cisco (e.g. jdoe, DOMAIN\jdoe, 10.1.1.0, or 2001:420:80:1::5)

Website: (e.g. google.com)

Transaction Type: Blocked

Advanced Current Criteria: Policy: PolicyForIT

Clear Search

Generated: 06 May 2015 18:03 (GMT) Printable Download

### Results

Displaying 1 - 3 of 3 items.

Time (GMT +00:00)	Website (count)	Display All Details...	Disposition	Bandwidth	User / Client IP
06 May 2015 18:02:22	http://sport.pl (2)		Block - URL Cat	0B	cisco 172.16.32.50
06 May 2015 17:50:15	http://sport.pl (2)		Block - URL Cat	0B	cisco 172.16.32.50
06 May 2015 17:48:36	http://sport.pl		Block - URL Cat	0B	cisco 172.16.32.50

Displaying 1 - 3 of 3 items.

Notice that ISE displays the username.

## Troubleshoot

This section provides information you can use in order to troubleshoot your configuration.

### Incorrect Certificates

When the WSA is not correctly initialized (certificates), test for ISE connection failure:

**Test Communication with ISE Server**

Start Test

```

Validating ISE Portal certificate ...
Success: Certificate validation successful

Checking connection to ISE PxGrid server...
Failure: Connection to ISE PxGrid server timed out

Test interrupted: Fatal error occurred, see details above.

```

The ISE pxgrid-cm.log reports:

```

[2015-05-06T16:26:51Z] [INFO ] [cm-1.jabber-172-16-31-202]
[TCPSocketStream::_doSSLHandshake] [] Failure performing SSL handshake: 1

```

The reason for the failure can be seen with Wireshark:

Source	Destination	Protocol	Info
172.16.32.204	172.16.31.202	TCP	34491 > xmpp-client [ACK] Seq=1 Ack=1 Win=131712 Len=0 TSval=66429032 TSecr=21743402
172.16.32.204	172.16.31.202	XMPP/XML	STREAM > xgrid.cisco.com
172.16.31.202	172.16.32.204	TCP	xmpp-client > 34491 [ACK] Seq=1 Ack=121 Win=14592 Len=0 TSval=21743403 TSecr=66429032
172.16.31.202	172.16.32.204	XMPP/XML	STREAM < xgrid.cisco.com
172.16.32.204	172.16.31.202	TCP	34491 > xmpp-client [ACK] Seq=121 Ack=179 Win=131584 Len=0 TSval=66429032 TSecr=21743403
172.16.31.202	172.16.32.204	XMPP/XML	FEATURES
172.16.32.204	172.16.31.202	TCP	34491 > xmpp-client [ACK] Seq=121 Ack=362 Win=131584 Len=0 TSval=66429032 TSecr=21743403
172.16.32.204	172.16.31.202	XMPP/XML	STARTTLS
172.16.31.202	172.16.32.204	XMPP/XML	PROCEED
172.16.32.204	172.16.31.202	TCP	34491 > xmpp-client [ACK] Seq=172 Ack=412 Win=131712 Len=0 TSval=66429072 TSecr=21743451
172.16.32.204	172.16.31.202	TCP	[TCP segment of a reassembled PDU]
172.16.31.202	172.16.32.204	TCP	[TCP segment of a reassembled PDU]
172.16.31.202	172.16.32.204	TCP	[TCP segment of a reassembled PDU]
172.16.32.204	172.16.31.202	TCP	34491 > xmpp-client [ACK] Seq=290 Ack=1860 Win=130904 Len=0 TSval=66429082 TSecr=21743451
172.16.32.204	172.16.31.202	TCP	34491 > xmpp-client [ACK] Seq=290 Ack=3260 Win=130968 Len=0 TSval=66429082 TSecr=21743451
172.16.32.204	172.16.31.202	TCP	[TCP segment of a reassembled PDU]
172.16.31.202	172.16.32.204	TLsv1	Server Hello, Certificate, Certificate Request, Server Hello Done, Ignored Unknown Record
172.16.31.202	172.16.32.204	TLsv1	Ignored Unknown Record
172.16.32.204	172.16.31.202	TLsv1	Client Hello, Alert (Level: Fatal, Description: Unknown CA), Alert (Level: Fatal, Descrip

> Frame 21: 80 bytes on wire (640 bits), 80 bytes captured (640 bits)  
 > Ethernet II, Src: VMware\_c0:00:01 (00:50:56:c0:00:01), Dst: VMware\_58:cb:ad (00:0c:29:58:cb:ad)  
 > Internet Protocol Version 4, Src: 172.16.32.204 (172.16.32.204), Dst: 172.16.31.202 (172.16.31.202)  
 > Transmission Control Protocol, Src Port: 34491 (34491), Dst Port: xmpp-client (5222), Seq: 297, Ack: 3310, Len: 14  
 > [3 Reassembled TCP Segments (139 bytes): #13(118), #18(7), #21(14)]

Secure Sockets Layer

- TLsv1 Record Layer: Handshake Protocol: Client Hello
- TLsv1 Record Layer: Alert (Level: Fatal, Description: Unknown CA)
- TLsv1 Record Layer: Alert (Level: Fatal, Description: Unknown CA)
- TLsv1 Record Layer: Alert (Level: Fatal, Description: Unknown CA)

For an SSL session used to protect Extensible Messaging and Presence Protocol (XMPP) exchange (used by pxGrid), the Client reports SSL failure because of an unknown certificate chain presented by the server.

## Correct Scenario

For the correct scenario, the ISE pxgrid-controller.log logs:

```
2015-05-06 18:40:09,153 INFO [Thread-7] [] cisco.pxgrid.controller.sasl.SaslWatcher
-:::- Handling authentication for user name wsa.example.com-test_client
```

Also, the ISE GUI presents the WSA as a subscriber with the correct capabilities:

Client Name	Client Description	Capabilities	Status	Client Group	Log
ise-admin-ise14		Capabilities(2 Pub, 1 Sub)	Online	Administrator	<a href="#">View</a>
ise-mnt-ise14		Capabilities(2 Pub, 0 Sub)	Online	Administrator	<a href="#">View</a>
tracport.example.com-pxgr...	pxGrid Connection from WSA	Capabilities(0 Pub, 2 Sub)	Online	Session	<a href="#">View</a>

Capability Detail			
Capability Name	Capability Version	Messaging Role	Message Filter
SessionDirectory	1.0	Sub	
TrustSecMetadata	1.0	Sub	

## Related Information

- ASA Version 9.2.1 VPN Posture with ISE Configuration Example

- **WSA 8.7 Users Guide**
- **ASA and Catalyst 3750X Series Switch TrustSec Configuration Example and Troubleshoot Guide**
- **Cisco TrustSec Switch Configuration Guide: Understanding Cisco TrustSec**
- **Configuring an External Server for Security Appliance User Authorization**
- **Cisco ASA Series VPN CLI Configuration Guide, 9.1**
- **Cisco Identity Services Engine User Guide, Release 1.2**
- **Technical Support & Documentation - Cisco Systems**

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