Cisco Cloud Web Security Troubleshooting Guide

Contents

Introduction

This document offers tips for resolving common errors that may occur with Cisco® Cloud Web Security (CWS) running on the Cisco Adaptive Security Appliance (ASA) Software 9.0. We assume that you are familiar with the Cisco ASA and the CWS connector that runs on it. We also assume that Cisco Cloud Web Security has already been configured on your ASA and you have obtained proper licensing for the Cisco Cloud Web Security administrator portal, Cisco ScanCenter.

For more information about the integration between Cisco Cloud Web Security and the Adaptive Security Appliance, please refer to the ASA configuration guide for Cisco Cloud Web Security at: http://tools.cisco.com/squish/eF3bE.

The following sections cover connectivity from the ASA to the CWS proxy, CWS functions, and user experience. These sections build upon each other, so you should troubleshoot in the order of these sections. You should resolve problems in previous sections before moving on to the next section.

Connectivity to the Cloud Web Security Proxy

CWS will not operate properly if the ASA cannot reach the CWS proxy. This section will help you determine whether the ASA has connectivity to the CWS proxy and possible steps for resolution if the proxy is not reachable.

Verifying Connectivity

To verify connectivity to the proxy, issue the command **show content-scan summary**. As you can see in the configuration that follows, if connectivity is established with the CWS proxy, you should see the word **(REACHABLE)** in parenthesis.

```
ciscoasa(config)# show scansafe server
Primary: proxy197.scansafe.net (72.37.244.115) (REACHABLE)*
Backup: proxy137.scansafe.net (80.254.152.99)
```

If instead you are seeing **(UNREACHABLE)** for one of the proxies, the ASA most likely does not have connectivity to that proxy.

```
# sh scansafe server
Primary: proxy555.scansafe.net (NOT RESOLVED) (UNREACHABLE) for last 12 secs,
tried to connect 0 times
Backup: proxy666.scansafe.net (NOT RESOLVED) (UNREACHABLE) for last 12 secs,
tried to connect 0 times
```

You can also establish a Telnet connection to the CWS proxy to test for connectivity. Use a TCP ping to connect the IP address or the fully qualified domain name of the proxy using the port you specified in your configuration. A success rate greater than zero means you have connectivity to the tower; if the success rate is zero, there is no connectivity.

```
! Connectivity between ASA and ScanSafe Tower
# ping tcp proxy197.scansafe.net 8080
Type escape sequence to abort.
No source specified. Pinging from identity interface.
```

```
Sending 5 TCP SYN requests to 72.37.244.115 port 8080
from xxx.xxx.xxx.xxx, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 21/22/23 ms

! No connectivity between ASA and ScanSafe Tower

# ping tcp proxy197.scansafe.net 8080
Type escape sequence to abort.
No source specified. Pinging from identity interface.
Sending 5 TCP SYN requests to 72.37.244.115 port 8080
from xxx.xxx.xxx.xxx, timeout is 2 seconds:
?????
Success rate is 0 percent (0/5)
```

Next Steps:

- Check your routing to make sure your network is able to reach the CWS proxy.
- Make sure there are no firewalls blocking access to the tower.
- If you need to contact support, open a case with the Cisco Technical Assistance Center at: Cisco TAC.

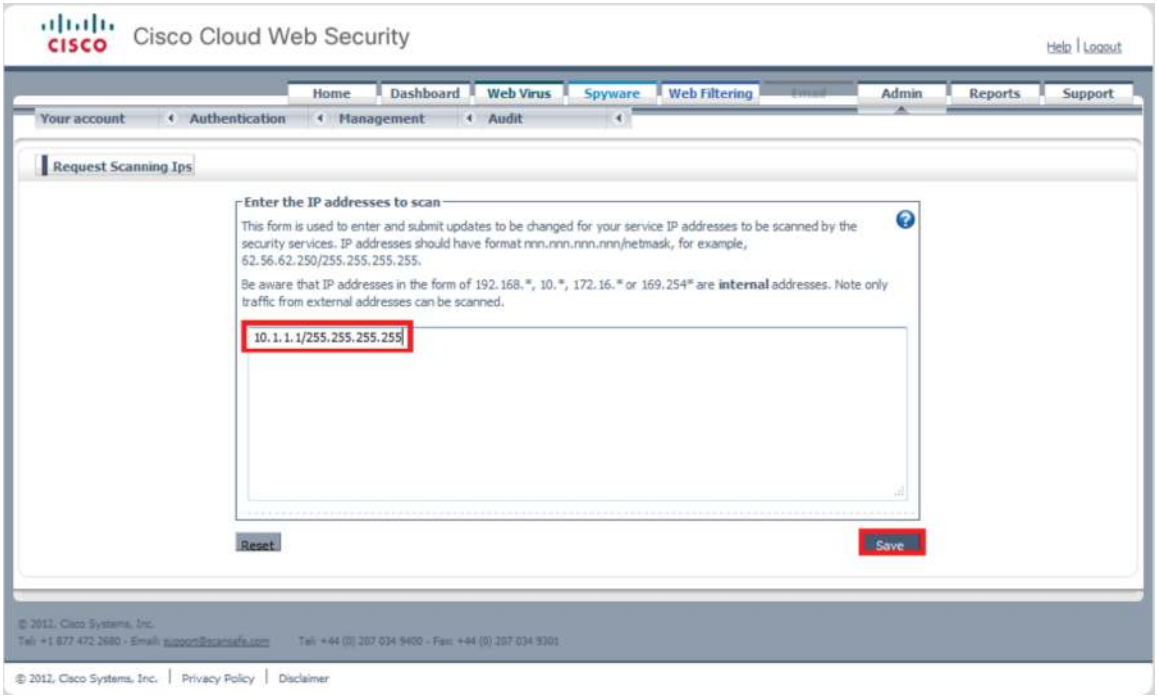
Distinguishing Between ASA and CWS Proxy Problems

If you have verified both proxies are accessible and you can connect with TCP to the proxies but you are getting blank pages when browsing, try to determine if the problem is with the ASA or the CWS proxy. If you need to open a support case, you will receive faster resolution reporting the case to the proper contact (either on the ASA side or the CWS side). To determine the origin of any problems, configure the proxy IP directly on the browser proxy settings to bypass the ASA. This bypass will allow you to determine whether you have an ASA or a proxy problem.

Because you will be bypassing the ASA and thus not using the license configured on it, the tower will not recognize you as an authorized user. To allow the CWS proxy to still recognize the traffic as authorized, you must first add your egress IP address to the list of scanning IPs in ScanCenter. You can find your egress IP address by going to www.whatismyip.com on your computer or client. The following example shows how to add the egress IP address to the CWS list of scanning IPs.

1. In ScanCenter, click the **Admin** tab, and under the **Your account** menu, select **Scanning IPs**.

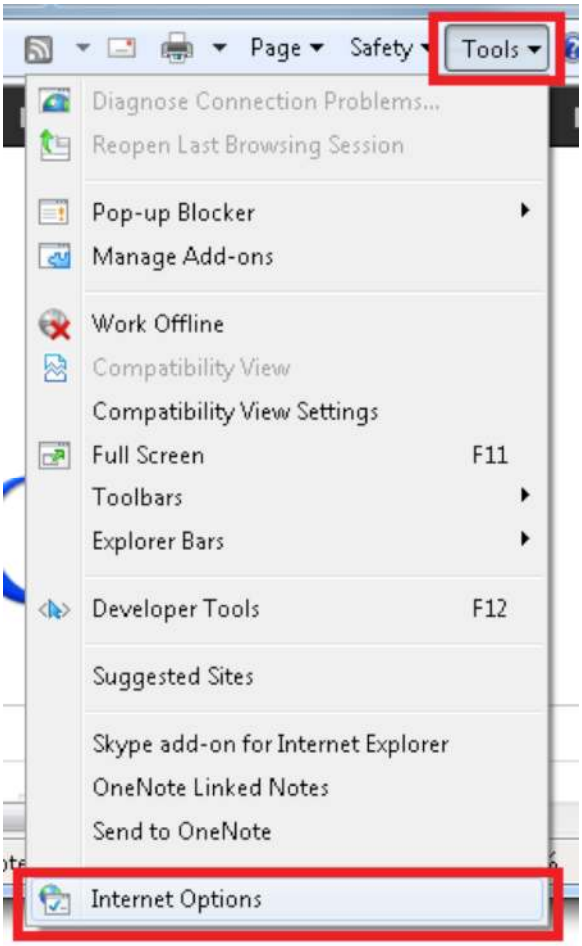
2. Enter the egress IP address in the list with the subnet mask, and click **Submit**.



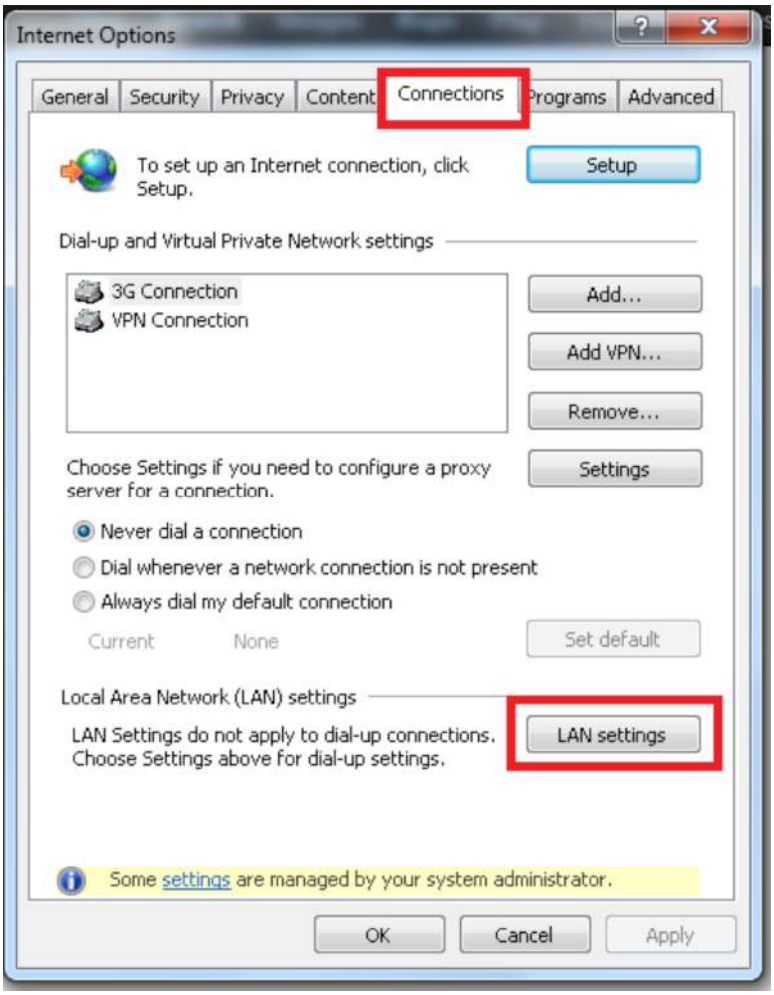
3. You will get a confirmation message that the Scanning IPs have been changed.

The following example shows how to configure a proxy with Internet Explorer (IE). Steps may vary for other browser versions.

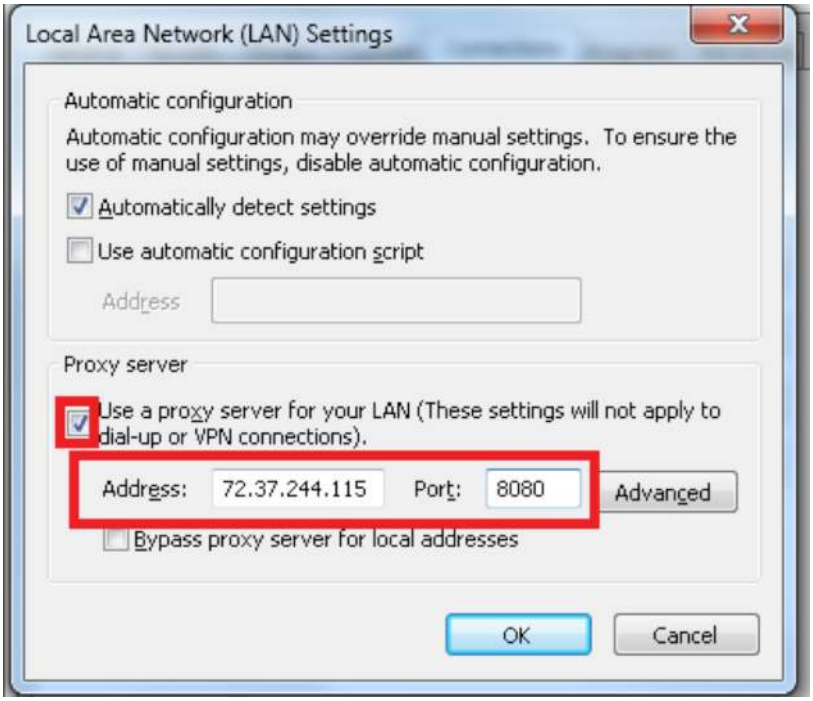
1. On IE, go to **Tools** → **Internet Optio**ns.



2. Under the **Connections** tab, click **LAN settings**.



3. Under the **Proxy Server** section, check the “Use a proxy server for your LAN” checkbox. Enter the IP address of the CWS proxy under **Address** and the port number under **Port**, and click OK when done.



Try browsing to a website now that you are bypassing the ASA. If you are able to browse properly, the problem is most likely with the ASA. Check your configurations and routing. If you are unable to browse, the problem is most likely with the CWS proxy, and you will have to contact your Cisco representatives.

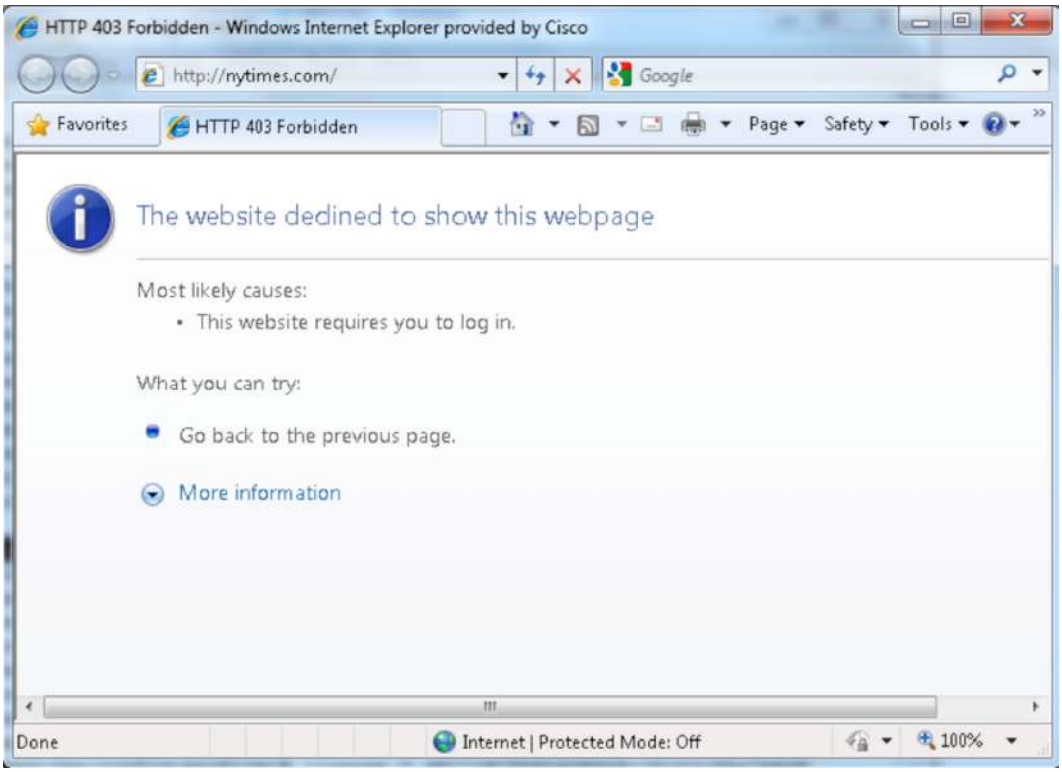
Note: If some users are complaining that their pages are not loading but other users are fine, check to see if the users whose pages are not loading are using a different proxy server instead of going through CWS.

Next Steps:

- If you are able to browse after configuring a proxy on your browser, the problem resides on the ASA side. If you need to contact support, open a case with Cisco TAC.
- If you are unable to browse after configuring a proxy on your browser, the problem resides on the CWS proxy side. If you need to contact support, open a case with Cisco TAC.

License Problems

If you have an invalid CWS license, the **show scansafe server** command may still show REACHABLE for connections to the tower. However, if you have a license problem, when you are browsing you will get a **403 Forbidden** error message similar to the following:



Next Steps:

- Verify that you entered the correct license key information on the ASA with the key provided on the Cisco ScanCenter portal.

```
# sh run scansafe
!
scansafe general-options
 server primary fqdn proxy197.scansafe.net port 8080
 server backup fqdn proxy137.scansafe.net port 8080
 retry-count 5
!
!! Make sure the license key on the router is correct
 license AEXXXXXXXXXXXXXXXXXXXXXXXXXXXXAA39 encrypted
```

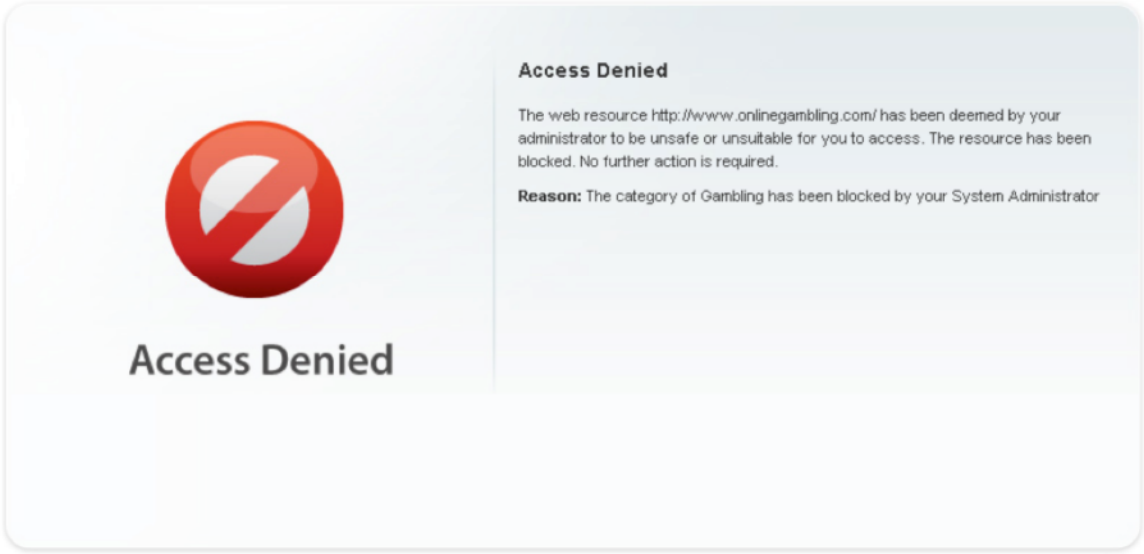
- You can also generate and send a new key from ScanCenter in case your key was misconfigured. Details about how to generate and send a key are available in the ScanCenter Administrator Guide.
- If you are unable to obtain a working license or key, contact Cisco TAC.

Cisco Cloud Web Security Functions

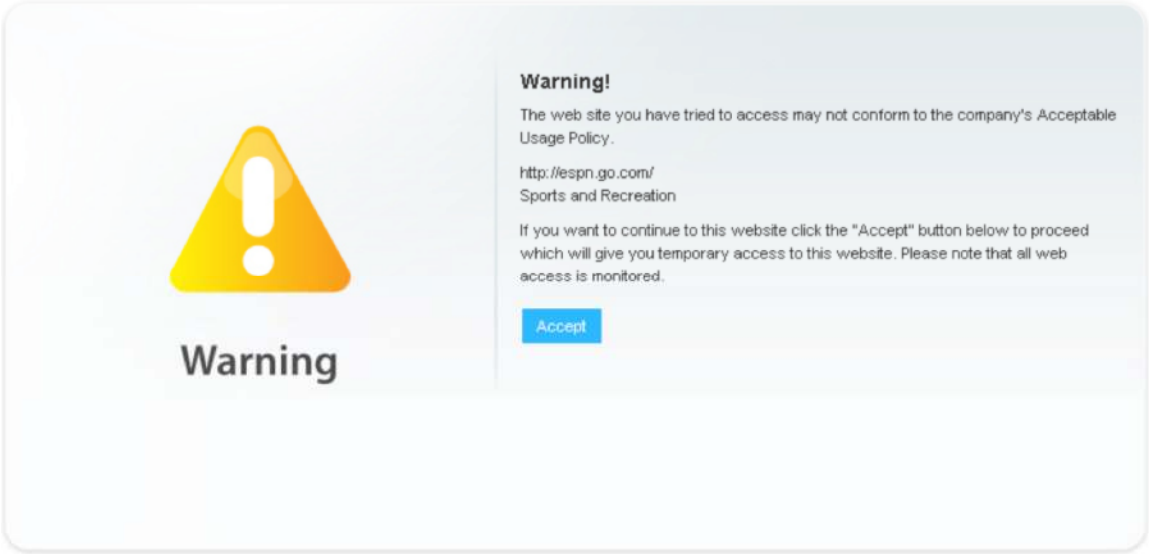
This section examines other situations in which users cannot reach websites. We assume in this section that the ASA has connectivity to the CWS proxy. Please refer to the section “Connectivity to the Cloud Web Security Proxy” if you are not certain about the connection.

Remember that you will get a block or warning message from CWS if you are trying to access a blocked or warned site. Displaying this message is one of the Cloud Web Security functions.

A CWS blocked message follows:



A CWS warning message follows; clicking “Accept” allows you to continue to the site.



If users are instead reporting that their webpages are not loading at all (for example, all they see is a blank page), check for the errors described in the following section.

Mismatched Time Zones

Because CWS uses time-based policies, users will not be able to access websites if the time zone on the ASA does not match the time zone on the CWS proxy.

Next Steps:

- The simplest way to solve this problem is to configure the ASA to use a Network Time Protocol (NTP) server:

```
ntp server 10.0.0.1 source outside prefer
```

Session Flows

Taking a closer look at session flows can help determine if CWS is redirecting traffic properly. To see the total number of redirected sessions as well as white-listed sessions (which bypass the CWS connector on ASA), use the **show scansafe statistics** command:

```
# show scansafe statistics
Current HTTP sessions : 12
Current HTTPS sessions : 0
Total HTTP Sessions : 102
Total HTTPS Sessions : 0
Total Fail HTTP sessions : 0
Total Fail HTTPS sessions : 0
Total Bytes In : 6532 Bytes
Total Bytes Out : 66622 Bytes
HTTP session Connect Latency in ms(min/max/avg) : 0/0/0
HTTPS session Connect Latency in ms(min/max/avg) : 0/0/0
```

As seen in bold in the example configuration, CWS is indeed redirecting traffic to the tower.

```
show service-policy inspect scansafe
```

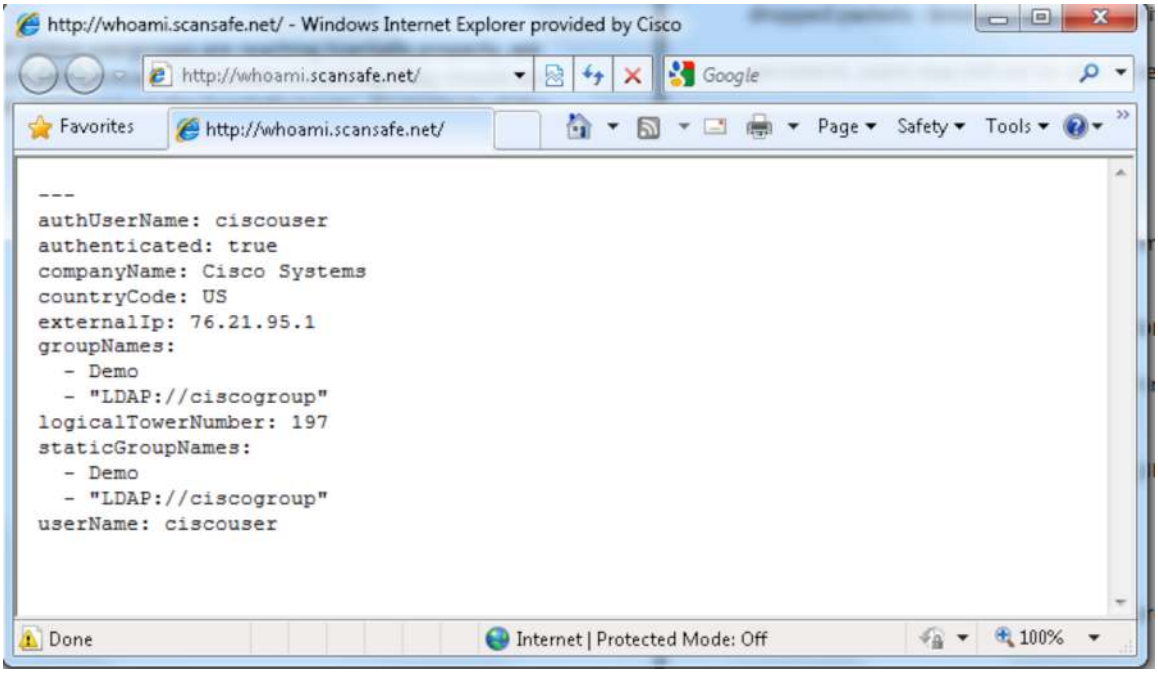
This command shows the number of connections redirected or white-listed by a particular policy. Example output follows:

```
ciscoasa(config)# show service-policy inspect scansafe
Global policy:
 Service-policy: global_policy
 Class-map: inspection_default
Interface inside:
 Service-policy: scansafe-pmap
 Class-map: scansafe-cmap
 Inspect: scansafe p-scansafe fail-open, packet 0, drop 0, reset-drop 0, v6-fail-
close 0
Number of whitelisted connections: 0
```

```
Number of connections allowed without scansafe inspection because of "fail-open"
config: 0
Number of connections dropped because of "fail-close" config: 0
Number of HTTP connections inspected: 0
Number of HTTPS connections inspected: 0
Number of HTTP connections dropped because of errors: 0
Number of HTTPS connections dropped because of errors: 0
```

Next Steps:

- As a final check to determine if individual users or entire usergroups are reaching the CWS proxy properly, ask users to go to http://whoami.scansafe.net/ on their browsers. If CWS is working, they should see an output with details of their usergroup account obtained from the CWS proxy. An example of the output follows:



- If redirection to CWS is working and users are still unable to load webpages, you should perform debugging on the CWS proxy side, because the connector on the ASA is already functioning properly. If you need to contact support, open a case with Cisco TAC.
- If redirection to CWS is not working, you should perform debugging on the ASA side. If you need to contact support, open a case with Cisco TAC.

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