CHAPTER 25

show asp drop through show curpriv Commands

show asp drop

To debug the accelerated security path dropped packets or connections, use the **show asp drop** command in privileged EXEC mode.

show asp drop [**flow** [*flow_drop_reason*] | **frame** [*frame_drop_reason*]]

Syntax Description

flow [*flow_drop_reason*]	(Optional) Shows the dropped flows (connections). You can specify a particular reason by using the *flow_drop_reason* argument. Valid values for the *flow_drop_reason* argument are listed in the "Usage Guidelines" section, below.
frame [*frame_drop_reason*]	(Optional) Shows the dropped packets. You can specify a particular reason by using the *frame_drop_reason* argument. Valid values for the *frame_drop_reason* argument are listed in the "Usage Guidelines" section, below.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.
7.0(8)/7.2(4)/8.0(4)/8.1(1)	Output now includes a timestamp indicating when the counters were last cleared (see the **clear asp drop** command). It also displays the drop reason keywords next to the description, so you can easily use the **capture asp-drop** command using the keyword.

Usage Guidelines

The **show asp drop** command shows the packets or connections dropped by the accelerated security path, which might help you troubleshoot a problem. See the *Cisco Security Appliance Command Line Configuration Guide* for more information about the accelerated security path. This information is used for debugging purposes only, and the information output is subject to change. Consult Cisco TAC to help you debug your system with this command.

The following sections include each drop reason name and description, including recommendations:

- Frame Drop Reasons, page 25-3
- Flow Drop Reasons, page 25-39

Frame Drop Reasons

```
-----------------------------------------------------------------
Name: punt-rate-limit
Punt rate limit exceeded:
    This counter will increment when the appliance attempts to forward a layer-2 packet to
a rate-limited control point service routine and the rate limit (per/second) is now being
exceeded. Currently, the only layer-2 packets destined for a control point service routine
which are rate limited are ARP packets. The ARP packet rate limit is 500 ARPs per second
per interface.

Recommendation:
    Analyze your network traffic to determine the reason behind the high rate of ARP
packets.

 Syslogs:
    322002, 322003


-----------------------------------------------------------------
Name: punt-no-mem
Punt no memory:
    This counter is incremented and the packet is dropped when there is no memory to
create data structure for punting a packet to Control Point.
Recommendation:
    No action needs to be taken if this condition is transient.  If this condition
persists due to low memory, then system upgrade might be necessary.

Syslogs:
    None


-----------------------------------------------------------------
Name: punt-queue-limit
Punt queue limit exceeded:
    This counter is incremented and the packet is dropped when punt queue limit is
exceeded, an indication that a bottle-neck is forming at Control Point.
Recommendation:
    No action needs to be taken.  This is a design limitation.

Syslogs:
    None


-----------------------------------------------------------------
Name: flow-being-freed
Flow is being freed:
    This counter is incremented when the flow is being freed and all packets queued for
inspection are dropped.
Recommendation:
    No action needs to be taken.

Syslogs:
    None


-----------------------------------------------------------------
Name: invalid-encap
Invalid Encapsulation:
    This counter is incremented when the security appliance receives a frame belonging to
an unsupported link-level protocol or if the L3type specified in the frame is not
supported by the appliance. The packet is dropped.

Recommendation:
```

```
    Verify that directly connected hosts have proper link-level protocol settings.

Syslogs:
    None.


----------------------------------------------------------------
Name: invalid-ip-header
Invalid IP header:
    This counter is incremented and the packet is dropped when the appliance receives an
IP packet whose computed checksum of the IP header does not match the recorded checksum in
the header.

Recommendation:
    The packet corruption may be caused by a bad cable or noise on the line. It may also
be that a peer is sending corrupted packets and an attack is in progress. Please use the
packet capture feature to learn more about the origin of the packet.

Syslogs:
    None


----------------------------------------------------------------
Name: unsupported-ip-version
Unsupported IP version:
    This counter is incremented when the security appliance receives an IP packet that has
an unsupported version in version field of IP header. Specifically, if the packet does not
belong to version 4 or version 6. The packet is dropped.

Recommendation:
    Verify that other devices on connected network are configured to send IP packets
belonging to versions 4 or 6 only.

Syslogs:
    None.


----------------------------------------------------------------
Name: invalid-ip-length
Invalid IP Length:
    This counter is incremented when the security appliance receives an IPv4 or IPv6
packet in which the header length or total length fields in IP header are not valid or do
not conform to the received packet length.

Recommendation:
    None.

Syslogs:
    None.


----------------------------------------------------------------
Name: invalid-ethertype
Invalid Ethertype:
    This counter is incremented when the fragmentation module on the security appliance
receives or tries to send a fragmented packet that does not belong IP version 4 or version
6. The packet is dropped.

Recommendation:
    Verify mtu of device and other devices on connected network to  determine why the
device is processing such fragments.

Syslogs:
    None.
```

```
------------------------------------------------------------------
Name: invalid-tcp-hdr-length
Invalid TCP Length:
    This counter is incremented when the security appliance receives a TCP packet whose
size is smaller than minimum-allowed header length or does not conform to the received
packet length.

Recommendation:
    The invalid packet could be a bogus packet being sent by an attacker.
Investigate the traffic from source in the following syslog.
Syslogs:
    500003.


------------------------------------------------------------------
Name: invalid-udp-length
Invalid UDP Length:
    This counter is incremented when the security appliance receives a UDP packet whose
size as calculated from the fields in header is different from the measured size of packet
as received from the network.

Recommendation:
    The invalid packet could be a bogus packet being sent by an attacker.

Syslogs:
    None.


------------------------------------------------------------------
Name: no-adjacency
No valid adjacency:
    This counter is incremented when the security appliance has tried to obtian an
adjacency and could not obtain mac-address for next hop. The packet is dropped.

Recommendation:
    Configure a capture for this drop reason and check if a host with specified
destination address exists on connected network or is routable from the device.

Syslogs:
   None.


------------------------------------------------------------------
Name: unexpected-packet
Unexpected packet:
    This counter is incremented when the appliance in transparent mode receives a non-IP
packet, destined to it's MAC address, but there is no corresponding service running on the
appliance to process the packet.

Recommendation:
    Verify if the appliance is under attack. If there are no suspicious packets, or the
device is not in transparent mode, this counter is most likely being incremented due to a
software error. Attempt to capture the traffic that is causing the counter to increment
and contact the Cisco TAC.

Syslogs:
    None


------------------------------------------------------------------
Name: no-route
No route to host:
```

```
    This counter is incremented when the security appliance tries to send a packet out of
an interface and does not find a route for it in routing table.

Recommendation:
    Verify that a route exists for the destination address obtained from thegenerated
syslog.

Syslogs:
   110001.


----------------------------------------------------------------
Name: rpf-violated
Reverse-path verify failed:
    This counter is incremented when ip-verify is configured on an interface and the
security appliance receives a packet for which the route lookup of source-ip did not yield
the same interface as the one on which the packet was received.

Recommendation:
    Trace the source of traffic based on source-ip printed in syslog below and investigate
why it is sending spoofed traffic.

Syslogs:
    106021.


----------------------------------------------------------------
Name: acl-drop
Flow is denied by configured rule:
    This counter is incremented when a drop rule is hit by the packet and gets dropped.
This rule could be a default rule created when the box comes up, when various features are
turned on or off, when an acl is applied to interface or any other feature etc. Apart from
default rule drops, a packet could be dropped because of:
     1) ACL configured on an interface
     2) ACL configured for AAA and AAA denied the user
     3) Thru-box traffic arriving at management-only ifc
     4) Unencrypted traffic arriving on a ipsec-enabled interface

Recommendation:
    Note if one of ACLs listed below are fired.

Syslogs:
    106023, 106100, 106004


----------------------------------------------------------------
Name: unable-to-create-flow
Flow denied due to resource limitation:
    This counter is incremented and the packet is dropped when flow creation fails due to
a system resource limitation.  The resource limit may be either:
       1) system memory
       2) packet block extension memory
       3) system connection limit
    Causes 1 and 2 will occur simultaneously with flow drop reason "No memory to complete
flow".

Recommendation:
    - Observe if free system memory is low.
    - Observe if flow drop reason "No memory to complete flow" occurs.
    - Observe if connection count reaches the system connection limit with the command
"show resource usage".

Syslogs:
    None
```

```
----------------------------------------------------------------
Name: unable-to-add-flow
Flow hash full:
    This counter is incremented when a newly created flow is inserted into flow hash table
and the insertion failed because the hash table was full. The flow and the packet are
dropped. This is different from counter that gets incremented when maximum connection
limit is reached.

Recommendation:
    This message signifies lack of resources on the device to support an operation that
should have been successful. Please check if the connections in the 'show conn' output
have exceeded their configured idle timeout values. If so, contact the Cisco Technical
Assistance Center (TAC).

Syslogs:
    None.


----------------------------------------------------------------
Name: np-sp-invalid-spi
Invalid SPI:
    This counter will increment when the appliance receives an IPSec ESP packet addressed
to the appliance which specifies a SPI (security parameter index) not currently known by
the appliance.

 Recommendation:
    Occasional invalid SPI indications are common, especially during rekey processing.
Many invalid SPI indications may suggest a problem or DoS attack. If you are experiencing
a high rate of invalid SPI indications, analyze your network traffic to determine the
source of the ESP traffic.

 Syslogs:
    402114


----------------------------------------------------------------
Name: unsupport-ipv6-hdr
Unsupported IPv6 header:
    This counter is incremented and the packet is dropped if an IPv6 packet is received
with an unsupported IPv6 extension header.  The supported IPv6 extension headers are: TCP,
UDP, ICMPv6, ESP, AH, Hop Options, Destination Options, and Fragment.  The IPv6 routing
extension header is not supported, and any extension header not listed above is not
supported.  IPv6 ESP and AH headers are supported only if the packet is through-the-box.
To-the-box IPv6 ESP and AH packets are not supported and will be dropped.

Recommendation:
    This error may be due to a misconfigured host.  If this error occurs repeatedly or in
large numbers, it could also indicate spurious or malicious activity such as an attempted
DoS attack.
Syslogs:
    None.


----------------------------------------------------------------
Name: natt-keepalive
NAT-T keepalive message:
    This counter will increment when the appliance receives an IPSec NAT-T keepalive
message.  NAT-T keepalive messages are sent from the IPSec peer to the appliance to keep
NAT/PAT flow information current in network devices between the NAT-T IPSec peer and the
appliance.

 Recommendation:
```

```
    If you have configured IPSec NAT-T on your appliance, this indication is normal and
doesn't indicate a problem.  If NAT-T is not configured on your appliance, analyze your
network traffic to determine the source of the NAT-T traffic.

 Syslogs:
    None


----------------------------------------------------------------
Name: tcp-not-syn
First TCP packet not SYN:
    Received a non SYN packet as the first packet of a non intercepted and non nailed
connection.

Recommendation:
    Under normal conditions, this may be seen when the appliance has already closed a
connection, and the client or server still believe the connection is open, and continue to
transmit data.  Some examples where this may occur is just after a 'clear local-host' or
'clear xlate' is issued. Also, if connections have not been recently removed, and the
counter is incrementing rapidly, the appliance may be under attack. Capture a sniffer
trace to help isolate the cause.
Syslogs:
    6106015


----------------------------------------------------------------
Name: bad-tcp-cksum
Bad TCP checksum:
    This counter is incremented and the packet is dropped when the appliance receives a
TCP packet whose computed TCP checksum does not match the recorded checksum in TCP header.

Recommendation:
    The packet corruption may be caused by a bad cable or noise on the line. It may also
be that a TCP endpoint is sending corrupted packets and an attack is in progress. Please
use the packet capture feature to learn more about the origin of the packet. To allow
packets with incorrect TCP checksum disable checksum-verification feature under tcp-map.

Syslogs:
    None


----------------------------------------------------------------
Name: bad-tcp-flags
Bad TCP flags:
    This counter is incremented and the packet is dropped when the appliance receives a
TCP packet with invalid TCP flags in TCP header. Example a packet with SYN and FIN TCP
flags set will be dropped.

Recommendations:
    The packet corruption may be caused by a bad cable or noise on the line. It may also
be that a TCP endpoint is sending corrupted packets and an attack is in progress. Please
use the packet capture feature to learn more about the origin of the packet.

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-reserved-set
TCP reserved flags set:
    This counter is incremented and the packet is dropped when the appliance receives a
TCP packet with reserved flags set in TCP header.

Recommendations:
```

```
    The packet corruption may be caused by a bad cable or noise on the line. It may also
be that a TCP endpoint is sending corrupted packets and an attack is in progress. Please
use the packet capture feature to learn more about the origin of the packet. To allow such
TCP packets or clear reserved flags and then pass the packet use reserved-bits
configuration under tcp-map.

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-bad-option-list
TCP option list invalid:
    This counter is incremented and the packet is dropped when the appliance receives a
TCP packet with a non-standard TCP header option.

Recommendations:
    To allow such TCP packets or clear non-standard TCP header options and then allow the
packet, use tcp-options configuration under tcp-map.

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-mss-exceeded
TCP data exceeded MSS:
    This counter is incremented and the packet is dropped when the appliance receives a
TCP packet with data length greater than the MSS advertized by peer TCP endpoint.

Recommendations:
    To allow such TCP packets use exceed-mss configuration under tcp-map

Syslogs:
    4419001


----------------------------------------------------------------
Name: tcp-synack-data
TCP SYNACK with data:
    This counter is incremented and the packet is dropped when the appliance receives a
TCP SYN-ACK packet with data.

Recommendations:
    The packet corruption may be caused by a bad cable or noise on the line. It may also
be that a TCP endpoint is sending corrupted packets and an attack is in progress. Please
use the packet capture feature to learn more about the origin of the packet.

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-syn-data
TCP SYN with data:
    This counter is incremented and the packet is dropped when the appliance receives a
TCP SYN packet with data.

Recommendations:
    To allow such TCP packets use syn-data configuration under tcp-map.

Syslogs:
    None
```

```
------------------------------------------------------------------
Name: tcp-dual-open
TCP Dual open denied:
    This counter is incremented and the packet is dropped when the appliance recevies a
TCP SYN packet from the server, when an embryonic TCP connection is already open.

Recommendations:
    None

Syslogs:
    None


------------------------------------------------------------------
Name: tcp-data-past-fin
TCP data send after FIN:
    This counter is incremented and the packet is dropped when the appliance recevies new
TCP data packet from an endpoint which had sent a FIN to close the connection.

Recommendations:
    None

Syslogs:
    None


------------------------------------------------------------------
Name: tcp-3whs-failed
TCP failed 3 way handshake:
    This counter is incremented and the packet is dropped when appliance receives an
invalid TCP packet during three-way-handshake. Example SYN-ACK from client will be dropped
for this reason.

Recommendations:
    None

Syslogs:
    None


------------------------------------------------------------------
Name: tcp-rstfin-ooo
TCP RST/FIN out of order:
    This counter is incremented and the packet is dropped when appliance receives a RST or
a FIN packet with incorrect TCP sequence number.

Recommendations:
    None

Syslogs:
    None


------------------------------------------------------------------
Name: tcp-seq-syn-diff
TCP SEQ in SYN/SYNACK invalid:
    This counter is incremented and the packet is dropped when appliance receives a SYN or
SYN-ACK packet during three-way-handshake with incorrect TCP sequence number.

Recommendations:
    None

Syslogs:
```

```
    None


----------------------------------------------------------------
Name: tcp-ack-syn-diff
TCP ACK in SYNACK invalid:
    This counter is incremented and the packet is dropped when appliance receives a
SYN-ACK packet during three-way-handshake with incorrect TCP acknowledgement number.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-syn-ooo
TCP SYN on established conn:
    This counter is incremented and the packet is dropped when appliance receives a TCP
SYN packet on an established TCP connection.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-synack-ooo
TCP SYNACK on established conn:
    This counter is incremented and the packet is dropped when appliance receives a TCP
SYN-ACK packet on an established TCP connection.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-seq-past-win
TCP packet SEQ past window:
    This counter is incremented and the packet is dropped when appliance receives a TCP
data packet with sequence number beyond the window allowed by the peer TCP endpoint.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-invalid-ack
TCP invalid ACK:
    This counter is incremented and the packet is dropped when appliance receives a TCP
packet with acknowledgement number greater than data sent by peer TCP endpoint.

Recommendations:
    None
```

```
Syslogs:
    None


----------------------------------------------------------------
Name: tcp-fo-drop
TCP replicated flow pak drop:
    This counter is incremented and the packet is dropped when appliance receives a TCP
packet with control flag like SYN, FIN or RST on an established connection just after the
appliance has taken over as active unit.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-discarded-ooo
TCP ACK in 3 way handshake invalid:
    This counter is incremented and the packet is dropped when appliance receives a TCP
ACK packet from client during three-way-handshake and the sequence number is not next
expected sequence number.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-buffer-full
TCP Out-of-Order packet buffer full:
    This counter is incremented and the packet is dropped when appliance receives an
out-of-order TCP packet on a connection and there is no buffer space to store this packet.
Typically TCP packets are put into order on connections that are inspected by the
appliance or when packets are sent to SSM for inspection. There is a default queue size
and when packets in excess of this default queue size are received they will be dropped.

Recommendations:
    On ASA platforms the queue size could be increased using queue-limit configuration
under tcp-map.

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-global-buffer-full
TCP global Out-of-Order packet buffer full:
    This counter is incremented and the packet is dropped when the security appliance
receives an out-of-order TCP packet on a connection and there are no more global buffers
available. Typically TCP packets are put into order on connections that are inspected by
the security appliance or when packets are sent to the SSM for inspection. When the global
Out-of-Order buffer queue is full, the packet will be dropped and this counter will
increment.

Recommendations:
    This is a temporary condition when all global buffers are used. If this counter is
constantly incrementing, then please check your network for large amounts of Out-of-Order
traffic, which could be caused by traffic of the same flow taking different routes through
the network.
```

```
Syslogs:
    None


----------------------------------------------------------------
Name: tcp-buffer-timeout
TCP Out-of-Order packet buffer timeout:
    This counter is incremented and the packet is dropped when a queued out of order TCP
packet has been held in the buffer for too long.Typically, TCP packets are put into order
on connections that are inspected by the security appliance or when packets are sent to
the SSM for inspection. When the next expected TCP packet does not arrive within a certain
period, the queued out of order packet is dropped.

Recommendations:
    The next expected TCP packet may not arrive due to congestion in the network which is
normal in a busy network. The TCP retransmission mechanism in the end host will retransmit
the packet and the session will continue.

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-rst-syn-in-win
TCP RST/SYN in window:
    This counter is incremented and the packet is dropped when appliance receives a TCP
SYN or TCP RST packet on an established connection with sequence number within window but
not next expected sequence number.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-acked
TCP DUP and has been ACKed:
    This counter is incremented and the packet is dropped when appliance receives a
retransmitted data packet and the data has been acknowledged by the peer TCP endpoint.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-paws-fail
TCP packet failed PAWS test:
    This counter is incremented and the packet is dropped when TCP packet with timestamp
header option fails the PAWS (Protect Against Wrapped Sequences) test.

Recommendations:
    To allow such connections to proceed, use tcp-options configuration under tcp-map to
clear timestamp option.

Syslogs:
    None
```

```
----------------------------------------------------------------
Name: tcp-conn-limit
TCP connection limit reached:
    This reason is given for dropping a TCP packet during TCP connection establishment
phase when the connection limit has been exceeded.  The connection limit is configured via
the 'set connection conn-max' action command.

Recommendation:
    If this is incrementing rapidly, check the syslogs to determine which host's
connection limit is reached.  The connection limit may need to be increased if the traffic
is normal, or the host may be under attack.

Syslogs:
    201011


----------------------------------------------------------------
Name: conn-limit
Connection limit reached:
    This reason is given for dropping a packet when the connection limit or host
connection limit has been exceeded.  If this is a TCP packet which is dropped during TCP
connection establishment phase due to connection limit, the drop reason 'TCP connection
limit reached' is also reported.

Recommendation:
    If this is incrementing rapidly, check the syslogs to determine which host's
connection limit is reached.  The connection limit may need to be increased if the traffic
is normal, or the host may be under attack.

Syslogs:
    201011


----------------------------------------------------------------
Name: tcp_xmit_partial
TCP retransmission partial:
    This counter is incremented and the packet is dropped when check-retranmission feature
is enabled and a partial TCP retransmission was received.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcpnorm-rexmit-bad
TCP bad retransmission:
    This counter is incremented and the packet is dropped when check-retranmission feature
is enabled and a TCP retranmission with different data from the original packet was
received.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: tcpnorm-win-variation
TCP unexpected window size variation:
```

```
    This counter is incremented and the packet is dropped when window size advertized by
TCP endpoint is drastically changed without accepting that much data.

Recommendations:
    In order to allow such packet, use the window-variation configuration under tcp-map.

Syslogs:
    None


----------------------------------------------------------------
Name: ipsecudp-keepalive
IPSEC/UDP keepalive message:
    This counter will increment when the appliance receives an IPSec over UDP keepalive
message. IPSec over UDP keepalive messages are sent from the IPSec peer to the appliance
to keep NAT/PAT flow information current in network devices between the IPSec over UDP
peer and the appliance. Note - These are not industry standard NAT-T keepalive messages
which are also carried over UDP and addressed to UDP port 4500.
 Recommendation:
    If you have configured IPSec over UDP on your appliance, this indication is normal and
doesn't indicate a problem.  If IPSec over UDP is not configured on your appliance,
analyze your network traffic to determine the source of the IPSec over UDP traffic.

 Syslogs:
    None


----------------------------------------------------------------
Name: rate-exceeded
QoS rate exceeded:
    This counter is incremented when rate-limiting (policing) is configured on an
egress/ingress interface and the egress/ingress traffic rate exceeds the burst rate
configured. The counter is incremented for each packet dropped.

Recommendation:
    Investigate and determine why the rate of traffic leaving/entering the interface is
higher than the configured rate. This may be normal, or could be an indication of virus or
attempted attack.

Syslogs:
    None.


----------------------------------------------------------------
Name: queue-removed
Rate-limiter queued packet dropped:
    When QoS config is changed or removed, the existing packets in the output queues
awaiting transmission are dropped and this counter is incremented.

Recommendation:
    Under normal conditions, this may be seen when the QoS configuration has been changed
by the user. If this occurs when no changes to QoS config were performed, please contact
Cisco Technical Assistance Center (TAC).

Syslogs:
   None.


----------------------------------------------------------------
Name: bad-crypto
Bad crypto return in packet:
    This counter will increment when the appliance attempts to perform a crypto operation
on a packet and the crypto operation fails. This is not a normal condition and could
indicate possible software or hardware problems with the appliance
```

```
 Recommendation:
    If you are receiving many bad crypto indications your appliance may need servicing.
You should enable syslog 402123 to determine whether the crypto errors are hardware or
software errors.  You can also check the error counter in the global IPSec statistics with
the 'show ipsec stats' CLI command. If the IPSec SA which is triggering these errors is
known, the SA statistics from the 'show ipsec sa detail' command will also be useful in
diagnosing the problem.

 Syslogs:
    402123


----------------------------------------------------------------
Name: bad-ipsec-prot
IPSec not AH or ESP:
    This counter will increment when the appliance receives a packet on an IPSec
connection which is not an AH or ESP protocol. This is not a normal condition.

 Recommendation:
    If you are receiving many IPSec not AH or ESP indications on your appliance, analyze
your network traffic to determine the source of the traffic.

 Syslogs:
    402115


----------------------------------------------------------------
Name: ipsec-ipv6
IPSec via IPV6:
    This counter will increment when the appliance receives an IPSec ESP packet, IPSec
NAT-T ESP packet or an IPSec over UDP ESP packet encapsulated in an IP version 6 header.
The appliance does not currently support any IPSec sessions encapsulated in IP version 6.

 Recommendation:
    None

 Syslogs:
    None


----------------------------------------------------------------
Name: bad-ipsec-natt
BAD IPSec NATT packet:
    This counter will increment when the appliance receives a packet on an IPSec
connection which has negotiated NAT-T but the packet is not addressed to the NAT-T UDP
destination port of 4500 or had an invalid payload length.

 Recommendation:
    Analyze your network traffic to determine the source of the NAT-T traffic.

 Syslogs:
    None


----------------------------------------------------------------
Name: bad-ipsec-udp
BAD IPSec UDP packet:
    This counter will increment when the appliance receives a packet on an IPSec
connection which has negotiated IPSec over UDP but the packet has an invalid payload
length.

 Recommendation:
    Analyze your network traffic to determine the source of the NAT-T traffic.
```

```
 Syslogs:
    None


----------------------------------------------------------------
Name: ipsec-need-sa
IPSec SA not negotiated yet:
    This counter will increment when the appliance receives a packet which requires
encryption but has no established IPSec security association. This is generally a normal
condition for LAN-to-LAN IPSec configurations. This indication will cause the appliance to
begin ISAKMP negotiations with the destination peer.

 Recommendation:
    If you have configured IPSec LAN-to-LAN on your appliance, this indication is normal
and doesn't indicate a problem.  However, if this counter increments rapidly it may
indicate a crypto configuration error or network error preventing the ISAKMP negotiation
from completing. Verify that you can communicate with the destination peer and verify your
crypto configuration via the 'show running-config' command.

 Syslogs:
    None


----------------------------------------------------------------
Name: ctm-error
CTM returned error:
    This counter will increment when the appliance attempts to perform a crypto operation
on a packet and the crypto operation fails. This is not a normal condition and could
indicate possible software or hardware problems with the appliance.

 Recommendation:
    If you are receiving many bad crypto indications your appliance may need servicing.
You should enable syslog 402123 to determine whether the crypto errors are hardware or
software errors.  You can also check the error counter in the global IPSec statistics with
the 'show ipsec stats' CLI command. If the IPSec SA which is triggering these errors is
known, the SA statistics from the 'show ipsec sa detail' command will also be     useful
in diagnosing the problem.

 Syslogs:
    402123


----------------------------------------------------------------
Name: send-ctm-error
Send to CTM returned error:
    This counter is obsolete in the appliance and should never increment.

 Recommendation:
    None

 Syslogs:
    None


----------------------------------------------------------------
Name: ipsec-spoof
IPSec spoof detected:
    This counter will increment when the appliance receives a packet which should have
been encrypted but was not.  The packet matched the inner header security policy check of
a configured and established IPSec connection on the appliance but was received
unencrypted.  This is a security issue.

 Recommendation:
```

```
    Analyze your network traffic to determine the source of the spoofed IPSec traffic.

 Syslogs:
    402117


----------------------------------------------------------------
Name: ipsec-clearpkt-notun
IPSec Clear Pkt w/no tunnel:
    This counter will increment when the appliance receives a packet which should have
been encrypted but was not.  The packet matched the inner header security policy check of
a configured and established IPSec connection on the appliance but was received
unencrypted.  This is a security issue.

 Recommendation:
    Analyze your network traffic to determine the source of the spoofed IPSec traffic.

 Syslogs:
    402117


----------------------------------------------------------------
Name: ipsec-tun-down
IPSec tunnel is down:
    This counter will increment when the appliance receives a packet associated with an
IPSec connection which is in the process of being deleted.

 Recommendation:
    This is a normal condition when the IPSec tunnel is torn down for any reason.

 Syslogs:
    None


----------------------------------------------------------------
Name: security-failed
Early security checks failed:
    This counter is incremented and packet is dropped when the security appliance :
    - receives an IPv4 multicast packet when the packets multicast MAC address doesn't
match the packets multicast destination IP address
    - receives an IPv6 or IPv4 teardrop fragment containing either small offset or
fragment overlapping
    - receives an IPv4 packet that matches an IP audit (IPS) signature

Recommendation:
    Contact the remote peer administrator or escalate this issue according to your
security policy
    For detailed description and syslogs for IP audit attack checks please refer the ip
audit signature section of command reference guide

Syslogs:
    106020
    400xx in case of ip audit checks


----------------------------------------------------------------
Name: sp-security-failed
Slowpath security checks failed:
    This counter is incremented and packet is dropped when the security appliance is:
    1) In routed mode receives a through-the-box:
       - L2 broadcast packet
       - IPv4 packet with destination IP address equal to 0.0.0.0
       - IPv4 packet with source IP address equal to 0.0.0.0
    2) In routed or transparent mode and receives a through-the-box IPv4 packet with:
```

```
       - first octet of the source IP address equal to zero
       - source IP address equal to the loopback IP address
       - network part of source IP address equal to all 0's
       - network part of the source IP address equal to all 1's
       - source IP address host part equal to all 0's or all 1's
    3) In routed or transparent mode and receives an IPv4 or IPv6 packet with same source
and destination IP addresses

Recommendation:
    1 and 2) Determine if an external user is trying to compromise the protected network.
Check for misconfigured clients.
    3) If this message counter is incrementing rapidly, an attack may be in progress. Use
the packet capture feature to capture type asp packets, and check the source MAC address
in the packet to see where they are coming from.

Syslogs:
    1 and 2) 106016
    3) 106017


----------------------------------------------------------------
Name: ipv6_sp-security-failed
IPv6 slowpath security checks failed:
    This counter is incremented and the packet is dropped for one of the following
reasons:
1) IPv6 through-the-box packet with identical source and destination address.
2) IPv6 through-the-box packet with linklocal source or destination address.
3) IPv6 through-the-box packet with multicast destination address.

Recommendation:
    These packets could indicate malicious activity, or could be the result of a
misconfigured IPv6 host.  Use the packet capture feature to capture type asp packets, and
use the source MAC address to identify the source.
Syslogs:
    For identical source and destination address, syslog 106016, else none.


----------------------------------------------------------------
Name: invalid-ip-option
IP option drop:
    This counter is incremented when any unicast packet with ip options or a multicast
packet with ip-options that have not been configured to be accepted, is received by the
security appliance. The packet is dropped.

Recommendation:
    Investigate why a packet with ip options is being sent by the sender.

Syslogs:
    None.


----------------------------------------------------------------
Name: lu-invalid-pkt
Invalid LU packet:
    Standby unit received a corrupted Logical Update packet.

Recommendation:
    The packet corruption could be caused by a bad cable, interface card, line noise, or
software defect. If the interface appears to be functioning properly, then report the
problem to Cisco TAC.

Syslogs:
    None
```

```
----------------------------------------------------------------
Name: fo-standby
Dropped by standby unit:
    If a through-the-box packet arrives at an appliance or context in a Standby state and
a flow is created, the packet is dropped and the flow removed. This counter will increment
each time a packet is dropped in this manner.

Recommendation:
    This counter should never be incrementing on the Active appliance or context. However,
it is normal to see it increment on the Standby appliance or context.

Syslogs:
    302014, 302016, 302018


----------------------------------------------------------------
Name: dst-l2_lookup-fail
Dst MAC L2 Lookup Failed:
    This counter will increment when the appliance is configured for transparent mode and
the appliance does a Layer 2 destination MAC address lookup which fails.  Upon the lookup
failure, the appliance will begin the destination MAC discovery process and attempt to
find the location of the host via ARP and/or ICMP messages.

 Recommendation:
    This is a normal condition when the appliance is configured for transparent mode. You
can also execute (show mac-address-table) to list the L2 MAC address locations currently
discovered by the appliance.

 Syslogs:
    None


----------------------------------------------------------------
Name: l2_same-lan-port
L2 Src/Dst same LAN port:
    This counter will increment when the appliance/context is configured for transparent
mode and the appliance determines that the destination interface's L2 MAC address is the
same as its ingress interface.

 Recommendation:
    This is a normal condition when the appliance/context is configured for transparent
mode.  Since the appliance interface is operating in promiscuous mode, the
appliance/context receives all packets on the local LAN seqment.

 Syslogs:
    None


----------------------------------------------------------------
Name: flow-expired
Expired flow:
    This counter is incremented when the security appliance tries to inject a new or
cached packet belonging to a flow that has already expired.It is also incremented when the
appliance attempts to send an rst on a tcp flow that has already expired or when a packet
returns from IDS blade but the flow had already expired. The packet is dropped

Recommendation:
    If valid applications are getting pre-empted, investigate if a longer timeout is
needed.

Syslogs:
   None.
```

```
------------------------------------------------------------------
Name: inspect-icmp-out-of-app-id
ICMP Inspect out of App ID:
    This counter will increment when the ICMP inspection engine fails to allocate an 'App
ID' data structure.  The structure is used to store the sequence number of the ICMP
packet.

Recommendation:
    Check the system memory usage.  This event normally happens when the system runs short
of memory.

Syslogs:
    None.


------------------------------------------------------------------
Name: inspect-icmp-seq-num-not-matched
ICMP Inspect seq num not matched:
    This counter will increment when the sequence number in the ICMP echo reply message
does not match any ICMP echo message that passed across the appliance earlier on the same
connection.

Recommendation:
    No action required if it is an intermittent event.  If the cause is an attack, you can
deny the host using the ACLs.

Syslogs:
    313004


------------------------------------------------------------------
Name: inspect-icmp-error-no-existing-conn
ICMP Error Inspect no existing conn:
    This counter will increment when the appliance is not able to find any established
connection related to the frame embedded in the ICMP error message.

Recommendation:
    No action required if it is an intermittent event.  If the cause is an attack, you can
deny the host using the ACLs.

Syslogs:
    313005


------------------------------------------------------------------
Name: inspect-icmp-error-different-embedded-conn
ICMP Error Inspect different embedded conn:
    This counter will increment when the frame embedded in the ICMP error message does not
match the established connection that has been identified when the ICMP connection is
created.

Recommendation:
    No action required if it is an intermittent event.  If the cause is an attack, you can
deny the host using the ACLs.

Syslogs:
    313005


------------------------------------------------------------------
Name: inspect-icmpv6-error-invalid-pak
ICMPv6 Error Inspect invalid packet:
```

```
    This counter will increment when the appliance detects an invalid frame embedded in
the ICMPv6 packet.  This check is the same as that on IPv6 packets. Examples: Incomplete
IPv6 header; malformed IPv6 Next Header; etc.

Recommendation:
    No action required.

Syslogs:
    None.


----------------------------------------------------------------
Name: inspect-icmpv6-error-no-existing-conn
ICMPv6 Error Inspect no existing conn:
    This counter will increment when the appliance is not able to find any established
connection related to the frame embedded in the ICMPv6 error message.

Recommendation:
    No action required if it is an intermittent event.  If the cause is an attack, you can
deny the host using the ACLs.

Syslogs:
    313005


----------------------------------------------------------------
Name: inspect-dns-invalid-pak
DNS Inspect invalid packet:
    This counter will increment when the appliance detects an invalid DNS packet.
Examples: A DNS packet with no DNS header; the number of DNS resource records not matching
the counter in the header; etc.

Recommendation:
    No action required.

Syslogs:
    None.


----------------------------------------------------------------
Name: inspect-dns-invalid-domain-label
DNS Inspect invalid domain label:
    This counter will increment when the appliance detects an invalid DNS domain name or
label. DNS domain name and label is checked per RFC 1035.

Recommendation:
    No action required.  If the domain name and label check is not desired, disable the
protocol-enforcement parameter in the DNS inspection policy-map (in supported releases).

Syslogs:
    None.


----------------------------------------------------------------
Name: inspect-dns-pak-too-long
DNS Inspect packet too long:
    This counter is incremented when the length of the DNS message exceeds the configured
maximum allowed value.

Recommendation:
    No action required.  If DNS message length checking is not desired, enable DNS
inspection without the 'maximum-length' option, or disable the 'message-length maximum'
parameter in the DNS inspection policy-map (in supported releases).
```

```
Syslogs:
    410001


------------------------------------------------------------------
Name: inspect-dns-out-of-app-id
DNS Inspect out of App ID:
    This counter will increment when the DNS inspection engine fails to allocate a data
structure to store the identification of the DNS message.
Recommendation:
    Check the system memory usage.  This event normally happens when the system runs short
of memory.

Syslogs:
    None.


------------------------------------------------------------------
Name: inspect-dns-id-not-matched
DNS Inspect ID not matched:
    This counter will increment when the identification of the DNS response message does
not match any DNS queries that passed across the appliance earlier on the same connection.

Recommendation:
    No action required if it is an intermittent event.  If the cause is an attack, you can
deny the host using the ACLs.

Syslogs:
    None.


------------------------------------------------------------------
Name: dns-guard-out-of-app-id
DNS Guard out of App ID:
    This counter will increment when the DNS Guard function fails to allocate a data
structure to store the identification of the DNS message.

Recommendation:
    Check the system memory usage.  This event normally happens when the system runs short
of memory.

Syslogs:
    None.


------------------------------------------------------------------
Name: dns-guard-id-not-matched
DNS Guard ID not matched:
    This counter will increment when the identification of the DNS response message does
not match any DNS queries that passed across the appliance earlier on the same connection.
This counter will increment by the DNS Guard function.

Recommendation:
    No action required if it is an intermittent event.  If the cause is an attack, you can
deny the host using the ACLs.

Syslogs:
    None.


------------------------------------------------------------------
Name: inspect-rtp-invalid-length
Invalid RTP Packet length:
```

```
    This counter will increment when the UDP packet length is less than the size of the
RTP header.

Recommendation:
    No action required. A capture can be used to figure out which RTP source is sending
the incorrect packets and you can deny the host using the ACLs.

Syslogs:
    None.


----------------------------------------------------------------
Name: inspect-rtp-invalid-version
Invalid RTP Version field:
    This counter will increment when the RTP version field contains a version other than
2.

Recommendation:
    The RTP source in your network does not seem to be sending RTP packets conformant with
the RFC 1889. The reason for this has to be identified and you can deny the host using
ACLs if required.

Syslogs:
    431001.


----------------------------------------------------------------
Name: inspect-rtp-invalid-payload-type
Invalid RTP Payload type field:
    This counter will increment when the RTP payload type field does not contain an audio
payload type when the signalling channel negotiated an audio media type for this RTP
secondary connection. The counter increments similarly for the video payload type.

Recommendation:
    The RTP source in your network is using the audio RTP secondary connection to send
video  or vice versa. If you wish to prevent this you can deny the host using ACLs.

Syslogs:
    431001.


----------------------------------------------------------------
Name: inspect-rtp-ssrc-mismatch
Invalid RTP Synchronization Source field:
    This counter will increment when the RTP SSRC field in the packet does not match the
SSRC which the inspect has been seeing from this RTP source in all the RTP packets.

Recommendation:
    This could be because the RTP source in your network is rebooting and hence changing
the SSRC or it could be because of another host on your network trying to use the opened
secondary RTP connections on the firewall to send RTP packets. This should be investigated
further to confirm if there is a problem.

Syslogs:
    431001.


----------------------------------------------------------------
Name: inspect-rtp-sequence-num-outofrange
RTP Sequence number out of range:
    This counter will increment when the RTP sequence number in the packet is not in the
range expected by the inspect.

Recommendation:
```

```
    No action is required because the inspect tries to recover and start tracking from a
new sequence number after a lapse in the sequence numbers from the RTP source.

Syslogs:
    431001.


----------------------------------------------------------------
Name: inspect-rtp-max-outofseq-paks-probation
RTP out of sequence packets in probation period:
    This counter will increment when the out of sequence packets when the RTP source is
being validated exceeds 20. During the probation period, the inspect looks for 5
in-sequence packets to consider the source validated.

Recommendation:
    Check the RTP source to see why the first few packets do not come in sequence and
correct it.

Syslogs:
    431001.


----------------------------------------------------------------
Name: inspect-rtcp-invalid-length
Invalid RTCP Packet length:
    This counter will increment when the UDP packet length is less than the size of the
RTCP header.

Recommendation:
    No action required. A capture can be used to figure out which RTP source is sending
the incorrect packets and you can deny the host using the ACLs.

Syslogs:
    None.


----------------------------------------------------------------
Name: inspect-rtcp-invalid-version
Invalid RTCP Version field:
    This counter will increment when the RTCP version field contains a version other than
2.

Recommendation:
    The RTP source in your network does not seem to be sending RTCP packets conformant
with the RFC 1889. The reason for this has to be identified and you can deny the host
using ACLs if required.

Syslogs:
    431002.


----------------------------------------------------------------
Name: inspect-rtcp-invalid-payload-type
Invalid RTCP Payload type field:
    This counter will increment when the RTCP payload type field does not contain the
values 200 to 204.

Recommendation:
    The RTP source should be validated to see why it is sending payload types outside of
the range recommended by the RFC 1889.

Syslogs:
    431002.
```

```
------------------------------------------------------------------
Name: inspect-srtp-encrypt-failed
Inspect SRTP Encryption failed:
    This counter will increment when SRTP encryption fails.

Recommendation:
    If error persists even after a reboot please call TAC to see why SRTP encryption is
failing in the hardware crypto accelerator.

Syslogs:
    337001.


------------------------------------------------------------------
Name: inspect-srtp-decrypt-failed
Inspect SRTP Decryption failed:
    This counter will increment when SRTP decryption fails.

Recommendation:
    If error persists even after a reboot please call TAC to see why SRTP decryption is
failing in the hardware crypto accelerator.

Syslogs:
    337002.


------------------------------------------------------------------
Name: inspect-srtp-validate-authtag-failed
Inspect SRTP Authentication tag validation failed:
    This counter will increment when SRTP authentication tag validation fails.

Recommendation:
    No action is required. If error persists SRTP packets arriving at the firewall are
being tampered with and the administrator has to identify the cause.

Syslogs:
    337003.


------------------------------------------------------------------
Name: inspect-srtp-generate-authtag-failed
Inspect SRTP Authentication tag generation failed:
    This counter will increment when SRTP authentication tag generation fails.

Recommendation:
    No action is required.

Syslogs:
    337004.


------------------------------------------------------------------
Name: inspect-srtp-no-output-flow
Inspect SRTP failed to find output flow:
    This counter will increment when the flow from the Phone proxy could not be created or
if the flow has been torn down

Recommendation:
    No action is required. The flow creation could have failed because of low memory
conditions.

Syslogs:
    None.
```

```
------------------------------------------------------------------
Name: inspect-srtp-setup-srtp-failed
Inspect SRTP setup in CTM failed:
    This counter will increment when SRTP setup in the CTM fails.

Recommendation:
    No action is required. If error persists call TAC to see why the CTM calls are
failing.

Syslogs:
    None.


------------------------------------------------------------------
Name: inspect-srtp-one-part-no-key
Inspect SRTP failed to find keys for both parties:
    This counter will increment when Inspect SRTP finds only one party's keys populated in
the media session.

Recommendation:
    No action is required. This counter could increment in the beginning phase of the call
but eventually when the call signaling exchange completes both parties should know their
respective keys.

Syslogs:
    None.


------------------------------------------------------------------
Name: inspect-srtp-no-media-session
Inspect SRTP Media session lookup failed:
    This counter will increment when SRTP media session lookup fails.

Recommendation:
    No action is required. The media session is created by Inspect SIP or Skinny when the
IP address is parsed as part of the signaling exchange. Debug the signaling messages to
figure out the cause.

Syslogs:
    None.


------------------------------------------------------------------
Name: inspect-srtp-no-remote-phone-proxy-ip
Inspect SRTP Remote Phone Proxy IP not populated:
    This counter will increment when remote phone proxy IP is not populated

Recommendation:
    No action is required. The remote phone proxy IP address is populated from the
signaling exchange. If error persists debug the signaling messages to figure out if ASA is
seeing all the signaling messages.

Syslogs:
    None.


------------------------------------------------------------------
Name: inspect-srtp-client-port-not-present
Inspect SRTP client port wildcarded in media session:
    This counter will increment when client port is not populated in media session

Recommendation:
```

```
    No action is required. The client port is populated dynamically when the media stream
comes in from the client. Capture the media packets to see if the client is sending media
packets.

Syslogs:
    None.


----------------------------------------------------------------
Name: ips-request
IPS Module requested drop:
    This counter is incremented and the packet is dropped as requested by IPS module when
the packet matches a signature on the IPS engine.

Recommendations:
    Check syslogs and alerts on IPS module.

Syslogs:
    420002


----------------------------------------------------------------
Name: ips-fail-close
IPS card is down:
    This counter is incremented and the packet is dropped when IPS card is down and
fail-close option was used in IPS inspection.

Recommendations:
    Check and bring up the IPS card.

Syslogs:
    420001


----------------------------------------------------------------
Name: ips-fail
IPS config removed for connection:
    This counter is incremented and the packet is dropped when IPS configuration is not
found for a particular connection.

Recommendations:
   check if any configuration changes have been done for IPS.

Syslogs:
   None


----------------------------------------------------------------
Name: l2_acl
FP L2 rule drop:
    This counter will increment when the appliance denies a packet due to a layer-2 ACL.
By default, in routed mode the appliance will PERMIT:
    1) IPv4 packets
    2) IPv6 packets
    3) ARP packets
    4) L2 Destination MAC of FFFF:FFFF:FFFF (broadcast)
    5) IPv4 MCAST packet with destination L2 of 0100:5E00:0000-0100:5EFE:FFFF
    6) IPv6 MCAST packet with destination L2 of 3333:0000:0000-3333:FFFF:FFFF

    By default, in Transparent mode permits the routed mode ACL and PERMITS:

    1) BPDU packets with destination L2 of 0100:0CCC:CCCD
    2) Appletalk packets with destination L2 of 0900:0700:0000-0900:07FF:FFFF
```

```
    The user can also configure ethertype ACL(s) and apply them to an interface to permit
other types of L2 traffic.

    Note - Packets permitted by L2 ACLs may still be dropped by L3-L4 ACLs.

 Recommendation:
    If your running the appliance/context in transparent mode and your NON-IP packets are
dropped by the appliance, you can configure an ethertype ACL and apply the ACL to an
access group. Note - the appliance ethertype CLI only supports protocol types and not L2
destination MAC     addresses.

 Syslogs:
    106026, 106027


----------------------------------------------------------------
Name: intercept-unexpected
Intercept unexpected packet:
    Either received data from client while waiting for SYNACK from server or received a
packet which cannot be handled in a particular state of TCP intercept.

Recommendation:
    If this drop is causing the connection to fail, please have a sniffer trace of the
client and server side of the connection while reporting the issue. The box could be under
attack and the sniffer traces or capture would help narrowing down the culprit.
Syslogs:
    None.


----------------------------------------------------------------
Name: no-mcast-entry
FP no mcast entry:
    A packet has arrived that matches a multicast flow, but the multicast service is no
longer enabled, or was re-enabled after the flow was built.
    - OR -
    A multicast entry change has been detected after a packet was punted to the CP, and
the NP can no longer forward the packet since no entry is present.

Recommendation:
    Reenable multicast if it is disabled.
    - OR -
    No action required.

Syslogs:
    None


----------------------------------------------------------------
Name: no-mcast-intrf
FP no mcast output intrf:
    All output interfaces have been removed from the multicast entry.
    - OR -
    The multicast packet could not be forwarded.

Recommendation:
    Verify that there are no longer any receivers for this group.
    - OR -
    Verify that a flow exists for this packet.

Syslogs:
    None


----------------------------------------------------------------
```

```
Name: fragment-reassembly-failed
Fragment reassembly failed:
    This counter is incremented when the appliance fails to reassemble a chain of
fragmented packets into a single packet. All the fragment packets in the chain are
dropped. This is most probably because of failure while allocating memory for the
reassembled packet.

Recommendation:
    Use the show blocks command to monitor the current block memory.

Syslogs:
    None


----------------------------------------------------------------
Name: ifc-classify
Virtual firewall classification failed:
    A packet arrived on a shared interface, but failed to classify to any specific context
interface.

Recommendation:
    For software versions without customizable mac-address support, use the "global" or
"static" command to specify the IPv4 addresses that belong to each context interface.  For
software versions with customizable mac-address support, enable "mac-address auto" in
system context.  Alternatively, configure unique MAC addresses for each context interfaces
residing over a shared interface with "mac-address" command under each context interface
submode.

Syslogs:
    None.


----------------------------------------------------------------
Name: connection-lock
Connection locking failed:
    While the packet was waiting for processing, the flow that would be usedwas destroyed.

Recommendation:
    The message could occur from user interface command to remove connection in an device
that is actively processing packet.  Otherwise, investigate flow drop counter.  This
message may occur if the flow are forced dropped from error.

Syslogs:
    None.


----------------------------------------------------------------
Name: interface-down
Interface is down:
    This counter will increment for each packet received on an interface that is shutdown
via the 'shutdown' interface sub-mode command. For ingress traffic, the packet is dropped
after security context classification and if the interface associated with the context is
shut down.  For egress traffic, the packet is dropped when the egress interface is shut
down.

Recommendation:
    No action required.

Syslogs:
    None.


----------------------------------------------------------------
Name: invalid-app-length
```

```
Invalid App length:
    This counter will increment when the appliance detects an invalid length of the Layer
7 payload in the packet.  Currently, it counts the drops by the DNS Guard function only.
Example: Incomplete DNS header.

Recommendation:
    No action required.

Syslogs:
    None.


----------------------------------------------------------------
Name: loopback-buffer-full
Loopback buffer full:
    This counter is incremented and the packet is dropped when packets are sent from one
context of the appliance to another context through a shared interface and there is no
buffer space in loopback queue.

Recommendations:
    Check system CPU to make sure it is not overloaded.

Syslogs:
    None


----------------------------------------------------------------
Name: non-ip-pkt-in-routed-mode
Non-IP packet received in routed mode:
    This counter will increment when the appliance receives a packet which is NOT IPv4,
IPv6 or ARP and the appliance/context is configured for ROUTED mode. In normal operation
such packets should be dropped by the default L2 ACL configuration.

 Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

 Syslogs:
    106026, 106027


----------------------------------------------------------------
Name: host-move-pkt
FP host move packet:
    This counter will increment when the appliance/context is configured for transparent
and source interface of a known L2 MAC address is detected on a different interface.

 Recommendation:
    This indicates that a host has been moved from one interface (i.e. LAN segment) to
another. This condition is normal while in transparent mode if the host has in fact been
moved. However, if the host move toggles back and forth between interfaces, a network loop
may be present.

 Syslogs:
    412001, 412002, 322001


----------------------------------------------------------------
Name: tfw-no-mgmt-ip-config
No management IP address configured for TFW:
    This counter is incremented when the security appliance receives an IP packet in
transparent mode and has no management IP address defined. The packet is dropped.

Recommendation:
    Configure the device with management IP address and mask values.
```

```
Syslogs:
    322004


-------------------------------------------------------------------
Name: shunned
Packet shunned:
    This counter will increment when a packet is received which has a source IP address
that matches a host in the shun database.

Recommendation:
    No action required.

Syslogs:
    401004


-------------------------------------------------------------------
Name: rm-conn-limit
RM connection limit reached:
    This counter is incremented when the maximum number of connections for a context or
the system has been reached and a new connection is attempted.

 Recommendation:
    The device administrator can use the commands 'show resource usage' and 'show resource
usage system' to view context and system resource limits and 'Denied' counts and adjust
resource limits if desired.

 Syslogs:
    321001


-------------------------------------------------------------------
Name: rm-conn-rate-limit
RM connection rate limit reached:
    This counter is incremented when the maximum connection rate for a context or the
system has been reached and a new connection is attempted.

 Recommendation:
    The device administrator can use the commands 'show resource usage' and 'show resource
usage system' to view context and system resource limits and 'Denied' counts and adjust
resource limits if desired.

 Syslogs:
    321002


-------------------------------------------------------------------
Name: np-socket-closed
Dropped pending packets in a closed socket:
    If a socket is abruptly closed, by the user or software, then any pending packets in
the pipeline for that socket are also dropped. This counter is incremented for each packet
in the pipeline that is dropped.

Recommendation:
    It is common to see this counter increment as part of normal operation. However, if
the counter is rapidly incrementing and there is a major malfunction of socket-based
applications, then this may be caused by a software defect. Contact the Cisco TAC to
investigate the issue further.

Syslogs:
    None.
```

```
----------------------------------------------------------------
Name: mp-pf-queue-full
Port Forwarding Queue Is Full:
       This counter is incremented when the Port Forwarding  application's internal queue
is full and it receives another packet  for transmission.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslogs:
    None.


----------------------------------------------------------------
Name: mp-svc-delete-in-progress
SVC Module received data while connection was being deleted:
    This counter will increment when the security appliance receives a packet associated
with an SVC connection that is in the process of being deleted.

Recommendation:
    This is a normal condition when the SVC connection is torn down for any reason. If
this error occurs repeatedly or in large numbers, it could indicate that clients are
having network connectivity issues.

Syslogs:
    None.


----------------------------------------------------------------
Name: mp-svc-bad-framing
SVC Module received badly framed data:
    This counter will increment when the security appliance receives a packet from an SVC
or the control software that it is unable to decode.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC. The SVC or
security appliance could be at fault.

Syslogs:
    722037 (Only for SVC received data).


----------------------------------------------------------------
Name: mp-svc-bad-length
SVC Module received bad data length:
    This counter will increment when the security appliance receives a packet from an SVC
or the control software where the calculated and specified lengths do not match.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC. The SVC or
security appliance could be at fault.

Syslogs:
    722037 (Only for SVC received data).


----------------------------------------------------------------
Name: mp-svc-unknown-type
SVC Module received unknown data frame:
    This counter will increment when the security appliance receives a packet from an SVC
where the data type is unknown.

Recommendation:
```

```
    Validate that the SVC being used by the client is compatible with the version of
security appliance software.

Syslogs:
   None.


-------------------------------------------------------------------
Name: mp-svc-addr-renew-response
SVC Module received address renew response data frame:
    This counter will increment when the security appliance receives an Address Renew
Response message from an SVC. The SVC should not be sending this message.

Recommendation:
    This indicates that an SVC software error should be reported to the Cisco TAC.

Syslogs:
   None.


-------------------------------------------------------------------
Name: mp-svc-no-prepend
SVC Module does not have enough space to insert header:
    This counter will increment when there is not enough space before the packet data to
prepend a MAC header in order to put the packet onto the network.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslogs:
   None.


-------------------------------------------------------------------
Name: mp-svc-no-channel
SVC Module does not have a channel for reinjection:
    This counter will increment when the interface that the encrypted data was received
upon cannot be found in order to inject the decrypted data.

Recommendation:
    If an interface is shut down during a connection, this could happen; re-enable/check
the interface. Otherwise, this indicates that a software error should be reported to the
Cisco TAC.

Syslogs:
   None.


-------------------------------------------------------------------
Name: mp-svc-no-session
SVC Module does not have a session:
    This counter will increment when the security appliance cannot determine the SVC
session that this data should be transmitted over.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslogs:
   None.


-------------------------------------------------------------------
Name: mp-svc-decompres-error
SVC Module decompression error:
```

```
    This counter will increment when the security appliance encounters an error during
decompression of data from an SVC.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC. The SVC or
security appliance could be at fault.

Syslogs:
   722037.


----------------------------------------------------------------
Name: mp-svc-compress-error
SVC Module compression error:
    This counter will increment when the security appliance encounters an error during
compression of data to an SVC.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC. The SVC or
security appliance could be at fault.

Syslogs:
   722037.


----------------------------------------------------------------
Name: mp-svc-no-mac
SVC Module unable to find L2 data for frame:
    This counter will increment when the security appliance is unable to find an L2 MAC
header for data received from an SVC.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslogs:
   None.


----------------------------------------------------------------
Name: mp-svc-invalid-mac
SVC Module found invalid L2 data in the frame:
    This counter will increment when the security appliance is finds an invalid L2 MAC
header attached to data received from an SVC.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslogs:
   None.


----------------------------------------------------------------
Name: mp-svc-invalid-mac-len
SVC Module found invalid L2 data length in the frame:
    This counter will increment when the security appliance is finds an invalid L2 MAC
length attached to data received from an SVC.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslogs:
   None.
```

```
----------------------------------------------------------------
Name: mp-svc-flow-control
SVC Session is in flow control:
    This counter will increment when the security appliance needs to drop data because an
SVC is temporarily not accepting any more data.

Recommendation:
    This indicates that the client is unable to accept more data. The client should reduce
the amount of traffic it is attempting to receive.

Syslogs:
   None.


----------------------------------------------------------------
Name: mp-svc-no-fragment
SVC Module unable to fragment packet:
    This counter is incremented when a packet to be sent to the SVC is not permitted to be
fragmented or when there are not enough data buffers to fragment the packet.

Recommendation:
    Increase the MTU of the SVC to reduce fragmentation. Avoid using applications that do
not permit fragmentation. Decrease the load on the device to increase available data
buffers.

Syslogs:
    None.


----------------------------------------------------------------
Name: ssm-dpp-invalid
Invalid packet received from SSM card:
    This counter only applies to the ASA 5500 series adaptive security appliance. It is
incremented when the security appliance receives a packet from the internal data plane
interface but could not find the proper driver to parse it.

Recommendation:
    The data plane driver is dynamically registered depending on the type of SSM installed
in the system. So this could happen if data plane packets arrive before the security
appliance is fully initialized. This counter is usually 0. You should not be concerned if
there are a few drops. However, if this counter keeps rising when system is up and
running, it may indicate a problem. Please contact Cisco Technical Assistance Center (TAC)
if you suspect it affects the normal operation of your the security appliance.

Syslogs:
    None.


----------------------------------------------------------------
Name: ssm-asdp-invalid
Invalid ASDP packet received from SSM card:
    This counter only applies to the ASA 5500 series adaptive security appliance. It is
incremented when the security appliance receives an ASA SSM Dataplane Protocol (ASDP)
packet from the internal data plane interface, but the driver encountered a problem when
parsing the packet. ASDP is a protocol used by the security appliance to communicate with
certain types of SSMs, like the CSC-SSM. This could happen for various reasons, for
example ASDP protocol version is not compatible between the security appliance and SSM, in
which case the card manager process in the control plane issues system messages and CLI
warnings to inform you of the proper version of images that need to be installed; the ASDP
packet belongs to a connection that has already been terminated on the security appliance;
the security appliance has switched to the standby state (if failover is enable) in which
case it can no longer pass traffic; or any unexpected value when parsing the ASDP header
and payload.
```

```
Recommendation:
    The counter is usually 0 or a very small number. But user should not be concerned if
the counter slowly increases over the time, especially when there has been a failover, or
you have manually cleared connections on the security appliance via CLI. If the counter
increases drastically during normal operation, please contact Cisco Technical Assistance
Center (TAC).

Syslogs:
    421003
    421004


----------------------------------------------------------------
Name: ssm-app-request
Service module requested drop:
    This counter only applies to the ASA 5500 series adaptive security appliance. It is
incremented when the application running on the SSM requests the security appliance to
drop a packet.

Recommendation:
    More information could be obtained by querying the incident report or system messages
generated by the SSM itself. Please consult the documentation that comes with your SSM for
instructions.

Syslogs:
    None.


----------------------------------------------------------------
Name: ssm-app-fail
Service module is down:
    This counter only applies to the ASA 5500 series adaptive security appliance. It is
incremented when a packet to be inspected by the SSM is dropped because the SSM has become
unavailable. Some examples of this are: software or hardware failure, software or
signature upgrade, or the module being shut down.

Recommendation:
    The card manager process running in the security appliance control plane would have
issued system messages and CLI warning to inform you of the failure. Please consult the
documentation that comes with the SSM to trouble shoot the SSM failure. Contact Cisco
Technical Assistance Center (TAC) if needed.

Syslog:
    None.


----------------------------------------------------------------
Name: wccp-return-no-route
No route to host for WCCP returned packet:
    This counter is incremented when a packet is returned from the Cache Engine and the
security appliance does not find a route for the original source of the packet.

Recommendation:
    Verify that a route exists for the source ip address of the packet returned from Cache
Engine.

Syslogs:
    None.


----------------------------------------------------------------
Name: wccp-redirect-no-route
No route to Cache Engine:
```

```
    This counter is incremented when the security appliance tries to redirect a packet and
does not find a route to the Cache Engine.

Recommendation:
    Verify that a route exists for Cache Engine.

Syslogs:
   None.


-------------------------------------------------------------
Name: vpn-handle-error
VPN Handle Error:
    This counter is incremented when the appliances is unable to create a VPN handle
because the VPN handle already exists.

 Recommendation:
    It is possible to see this counter increment as part of normal operation However, if
the counter is rapidly incrementing and there is a major malfunction of vpn-based
applications, then this may be caused by a software defect. Contact the Cisco TAC to
investigate the issue further.

 Syslogs:
    None.


-------------------------------------------------------------
Name: telnet-not-permitted
Telnet not permitted on least secure interface:
    This counter is incremented and packet is dropped when the appliance receives a TCP
SYN packet attempting to establish a TELNET session to the appliance and that packet was
received on the least secure interface.

 Recommendation:
    To establish a TELNET session to the appliance via the least secure interface, first
establish an IPSec tunnel to that interface and then connect the TELNET session over that
tunnel.

 Syslogs:
    402117


-------------------------------------------------------------
Name: channel-closed
Data path channel closed:
    This counter is incremented when the data path channel has been closed before the
packet attempts to be sent out through this channel.  Recommendation:
    It is normal in multi-processor system when one processor closes the channel (e.g.,
via CLI), and another processor tries to send a packet through the channel.
 Syslogs:
    None


-------------------------------------------------------------
Name: dispatch-decode-err
Diapatch decode error:
    This counter is incremented when the packet dispatch module finds an error when
decoding the frame.  An example is an unsupported packet frame.  Recommendation:
    Verify the packet format with a capture tool.
 Syslogs:
    None


-------------------------------------------------------------
```

```
Name: ipsec-lock-error
IPSec locking error:
    This counter is incremented when an IPSec operation is attempted but fails     due to
an internal locking error.

Recommendation:
    This condition should never be encountered during normal operation and     may
indicate a software problem with the appliance.  Contact the Cisco     Technical
Assistance Center (TAC) if this error occurs.

Syslogs:
    None.


----------------------------------------------------------------
Name: cp-event-queue-error
CP event queue error:
    This counter is incremented when a CP event queue enqueue attempt has     failed due
to queue length exceeded. This queue is used by the data-path     to punt packets to the
control-point for additional processing. This     condition is only possible in a
multi-processor enviroment. The module     that attempted to enqueue the packet may issue
it's own packet specific     drop in response to this error.  Recommendation:
    While this error does indicate a failure to completely process a     packet, it may
not adversely affect the connection. If the condition     persists or connections are
adversely affected contact the Cisco     Technical Assistance Center (TAC).  Syslogs:
    None


----------------------------------------------------------------
Name: cp-syslog-event-queue-error
CP syslog event queue error:
    This counter is incremented when a CP syslog event queue enqueue attempt     has
failed due to queue length exceeded. This queue is used by the     data-path to punt
logging events to the control-point when logging     destinations other than to a UDP
server are configured. This     condition is only possible in a multi-processor
environment.  Recommendation:
    While this error does indicate a failure to completely process a     logging event,
logging to UDP servers should not be affected. If     the condition persists consider
lowering the logging level and/or     removing logging destinations or contact the Cisco
Technical     Assistance Center (TAC).  Syslogs:
    None


----------------------------------------------------------------
Name: dispatch-block-alloc
Dispatch block unavailable:
     This counter is incremented and the packet is dropped when the appliance     could
not allocate a core local block to process the packet that was     received by the
interface driver.
Recommendation:
    This may be due to packets being queued for later processing or a     block leak. Core
local blocks may also not be available if they are not     replenished on time by the free
resource rebalancing logic. Please use     "show blocks core" to further diagnose the
problem.
Syslogs:
    None


----------------------------------------------------------------
```

Flow Drop Reasons

```
----------------------------------------------------------------
```

```
Name: tunnel-torn-down
Tunnel has been torn down:
    This counter will increment when the appliance receives a packet associated with an
established flow whose IPSec security association is in the process of being deleted.

Recommendation:
    This is a normal condition when the IPSec tunnel is torn down for any reason.

Syslogs:
    None


----------------------------------------------------------------
Name: out-of-memory
No memory to complete flow:
    This counter is incremented when the appliance is unable to create a flow because of
insufficient memory.

Recommendation:
    Verify that the box is not under attack by checking the current connections. Also
verify if the configured timeout values are too large resulting in idle flows residing in
memory longer. Check the free memory available by issuing 'show memory'.  If free memory
is low, issue the command 'show processes memory' to determine which processes are
utilizing most of the memory.

Syslogs:
    None


----------------------------------------------------------------
Name: parent-closed
Parent flow is closed:
    When the parent flow of a subordinating flow is closed, the subordinating flow is also
closed.  For example, an FTP data flow (subordinating flow) will be closed with this
specific reason when its control flow (parent flow) is terminated.  This reason is also
given when a secondary flow (pin-hole) is closed by its controlling application.  For
example, when the BYE messaged is received, the SIP inspection engine (controlling
application) will close the corresponding SIP RTP flows (secondary flow).

Recommendation:
    None.

Syslogs:
    None.


----------------------------------------------------------------
Name: closed-by-inspection
Flow closed by inspection:
    This reason is given for closing a flow due to an error detected during application
inspection.  For example, if an error is detected during inspecting an H323 message, the
corresponding H323 flow is closed with this reason.

Recommendation:
    None.

Syslogs:
    None.


----------------------------------------------------------------
Name: fo-primary-closed
Failover primary closed:
```

```
    Standby unit received a flow delete message from the active unit and terminated the
flow.

Recommendation:
    If the appliance is running stateful failover, then this counter should increment for
every replicated connection that is torn down on the standby appliance.

Syslogs:
    302014, 302016, 302018


----------------------------------------------------------------
Name: fo-standby
Flow closed by failover standby:
    If a through-the-box packet arrives at an appliance or context is in a Standby state,
and a flow is created, the packet is dropped and the flow removed.  This counter will
increment each time a flow is removed in this manner.

Recommendation:
    This counter should never be incrementing on the Active appliance or context. However,
it is normal to see it increment on the Standby appliance or context.

Syslogs:
    302014, 302016, 302018


----------------------------------------------------------------
Name: fo_rep_err
Standby flow replication error:
    Standby unit failed to replicate a flow.

Recommendation:
    If appliance is processing VPN traffic, then this counter could be constantly
increasing on the standby unit because of the flow could be replicated before the IKE SA
info. No action is required in this case. If the appliance is not processing VPN traffic,
then this indicate a software detect, turn on the debug: "debug fover fail" on the standby
unit, collect the debug output, and report the problem to Cisco TAC.

Syslogs:
    302014, 302016, 302018


----------------------------------------------------------------
Name: loopback
Flow is a loopback:
    This reason is given for closing a flow due to the following conditions: 1) when
U-turn traffic is present on the flow, and, 2) 'same-security-traffic permit
intra-interface' is not configured.

Recommendation:
    To allow U-turn traffic on an interface, configure the interface with
'same-security-traffic permit intra-interface'.

Syslogs:
    None.


----------------------------------------------------------------
Name: acl-drop
Flow is denied by access rule:
     This counter is incremented when a drop rule is hit by the packet and flow creation
is denied. This rule could be a default rule created when the box comes up, when various
features are turned on or off, when an acl is applied to interface or any other feature
etc. Apart from default rule drops, a flow could be denied because of:
```

```
     1) ACL configured on an interface
     2) ACL configured for AAA and AAA denied the user
     3) Thru-box traffic arriving at management-only ifc
     4) Unencrypted traffic arriving on a ipsec-enabled interface
     5) Implicity deny 'ip any any' at the end of an ACL

Recommendation:
    Observe if one of syslogs related to packet drop are fired. Flow drop results in the
corresponding packet-drop that would fire requisite syslog.

Syslogs:
    None.


----------------------------------------------------------------
Name: pinhole-timeout
Pinhole timeout:
    This counter is incremented to report that the appliance opened a secondary flow, but
no packets passed through this flow within the timeout interval, and hence it was removed.
An example of a secondary flow is the FTP data channel that is created after successful
negotiation on the FTP control channel.

Recommendation:
    No action required.

Syslogs:
    302014, 302016


----------------------------------------------------------------
Name: host-removed
Host is removed:
    Flow removed in response to "clear local-host" command.

Recommendation:
    This is an information counter.

Syslogs:
    302014, 302016, 302018, 302021, 305010, 305012, 609002


----------------------------------------------------------------
Name: xlate-removed
Xlate Clear:
    Flow removed in response to "clear xlate" or "clear local-host" command.

Recommendation:
    This is an information counter.

Syslogs:
    302014, 302016, 302018, 302021, 305010, 305012, 609002


----------------------------------------------------------------
Name: connection-timeout
Connection timeout:
    This counter is incremented when a flow is closed because of the expiration of it's
inactivity timer.

Recommendation:
    No action required.

Syslogs:
    302014, 302016, 302018, 302021
```

```
------------------------------------------------------------------
Name: conn-limit-exceeded
Connection limit exceeded:
    This reason is given for closing a flow when the connection limit has been exceeded.
The connection limit is configured via the 'set connection conn-max' action command.

Recommendation:
    None.

Syslogs:
    201011


------------------------------------------------------------------
Name: tcp-fins
TCP FINs:
    This reason is given for closing a TCP flow when TCP FIN packets are received.

Recommendations:
    This counter will increment for each TCP connection that is terminated normally with
FINs.

Syslogs:
    302014


------------------------------------------------------------------
Name: syn-timeout
SYN Timeout:
    This reason is given for closing a TCP flow due to expiry of embryonic timer.

Recommendations:
    If these are valid session which take longer to establish a connection increase the
embryonic timeout.

Syslogs:
    302014


------------------------------------------------------------------
Name: fin-timeout
FIN Timeout:
    This reason is given for closing a TCP flow due to expiry of half-closed timer.

Recommendations:
    If these are valid session which take longer to close a TCP flow, increase the
half-closed timeout.

Syslogs:
    302014


------------------------------------------------------------------
Name: reset-in
TCP Reset-I:
    This reason is given for closing an outbound flow (from a low-security interface to a
same- or high-security interface) when a TCP reset is received on the flow.

Recommendation:
    None.

Syslogs:
```

```
    302014


----------------------------------------------------------------
Name: reset-out
TCP Reset-O:
    This reason is given for closing an inbound flow (from a high-security interface to
low-security interface) when a TCP reset is received on the flow.

Recommendation:
    None.

Syslogs:
    302014


----------------------------------------------------------------
Name: recurse
Close recursive flow:
    A flow was recursively freed.  This reason applies to pair flows, multicast slave
flows, and syslog flows to prevent syslogs being issued for each of these subordinate
flows.

Recommendation:
    No action required.

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-intecept-no-response
TCP intercept, no response from server:
    SYN retransmission timeout after trying three times, once every second. Server
unreachable, tearing down connection.

Recommendation:
    Check if the server is reachable from the ASA.

Syslogs:
    None


----------------------------------------------------------------
Name: tcp-intercept-unexpected
TCP intercept unexpected state:
    Logic error in TCP intercept module, this should never happen.

Recommendation:
    Indicates memory corruption or some other logic error in the TCP intercept module.

Syslogs:
    None


----------------------------------------------------------------
Name: tcpnorm-rexmit-bad
TCP bad retransmission:
    This reason is given for closing a TCP flow when check-retranmission feature is
enabled and the TCP endpoint sent a retranmission with different data from the original
packet.

Recommendations:
```

```
    The TCP endpoint maybe attacking by sending different data in TCP retransmits. Please
use the packet capture feature to learn more about the origin of the packet.

Syslogs:
    302014


----------------------------------------------------------------
Name: tcpnorm-win-variation
TCP unexpected window size variation:
    This reason is given for closing a TCP flow when window size advertized by TCP
endpoint is drastically changed without accepting that much data.

Recommendations:
    In order to allow this connection, use the window-variation configuration under
tcp-map.

Syslogs:
    302014


----------------------------------------------------------------
Name: tcpnorm-invalid-syn
TCP invalid SYN:
    This reason is given for closing a TCP flow when the SYN packet is invalid.

Recommendations:
    SYN packet could be invalid for number of reasons, like invalid checksum, invalid TCP
header. Please use the packet capture feature to understand why the SYN packet is invalid.
If you would like to allow these connection use tcp-map configurations to bypass checks.

Syslogs:
    302014


----------------------------------------------------------------
Name: mcast-intrf-removed
Multicast interface removed:
    An output interface has been removed from the multicast entry.
    - OR -
    All output interfaces have been removed from the multicast entry.

Recommendation:
    No action required.
    - OR -
    Verify that there are no longer any receivers for this group.

Syslogs:
    None


----------------------------------------------------------------
Name: mcast-entry-removed
Multicast entry removed:
    A packet has arrived that matches a multicast flow, but the multicast service is no
longer enabled, or was re-enabled after the flow was built.
    - OR -
    The multicast entry has been deleted so the flow is being cleaned up, but the packet
will be reinjected into the data path.

Recommendation:
    Reenable multicast if it is disabled.
    - OR -
    No action required.
```

```
Syslogs:
    None


----------------------------------------------------------------
Name: tcp-intercept-kill
Flow terminated by TCP Intercept:
    TCP intercept would teardown a connection if this is the first SYN, a connection is
created for the SYN, and TCP intercept replied with a SYN cookie, or after seeing a valid
ACK from client, when TCP intercept sends a SYN to server, server replies with a RST.

Recommendation:
    TCP intercept normally does not create a connection for first SYN, except when there
are nailed rules or the packet comes over a VPN tunnel or the next hop gateway address to
reach the client is not resolved. So for the first SYN this indicates that a connection
got created. When TCP intercept receives a RST from server, its likely the corresponding
port is closed on the server.

Syslogs:
    None


----------------------------------------------------------------
Name: audit-failure
Audit failure:
    A flow was freed after matching an "ip audit" signature that had reset as the
associated action.

Recommendation:
    If removing the flow is not the desired outcome of matching this signature, then
remove the reset action from the "ip audit" command.

Syslogs:
    None


----------------------------------------------------------------
Name: ips-request
Flow terminated by IPS:
    This reason is given for terminating a flow as requested by IPS module.

Recommendations:
    Check syslogs and alerts on IPS module.

Syslogs:
    420002


----------------------------------------------------------------
Name: ips-fail-close
IPS fail-close:
    This reason is given for terminating a flow since IPS card is down and fail-close
option was used with IPS inspection.

Recommendations:
    Check and bring up IPS card

Syslogs:
    420001


----------------------------------------------------------------
Name: reinject-punt
```

```
Flow terminated by punt action:
    This counter is incremented when a packet is punted to the exception-path for
processing by one of the enhanced services such as inspect, aaa etc and the servicing
routine, having detected a violation in the traffic flowing on the flow, requests that the
flow be dropped. The flow is immediately dropped.

Recommendation:
    Please watch for syslogs fired by servicing routine for more information. Flow drop
terminates the corresponding connection.

Syslogs:
    None.


----------------------------------------------------------------
Name: shunned
Flow shunned:
    This counter will increment when a packet is received which has a source IP address
that matches a host in the shun database.  When a shun command is applied, it will be
incremented for each existing flow that matches the shun command.

Recommendation:
    No action required.

Syslogs:
    401004


----------------------------------------------------------------
Name: host-limit
host-limit

----------------------------------------------------------------
Name: nat-failed
NAT failed:
    Failed to create an xlate to translate an IP or transport header.

Recommendation:
    If NAT is not desired, disable "nat-control".  Otherwise, use the "static", "nat" or
"global" command to configure NAT policy for the dropped flow.  For dynamic NAT, ensure
that each "nat" command is paired with at least one "global" command.  Use "show nat" and
"debug pix process" to verify NAT rules.

Syslogs:
    305005, 305006, 305009, 305010, 305011, 305012


----------------------------------------------------------------
Name: nat-rpf-failed
NAT reverse path failed:
    Rejected attempt to connect to a translated host using the translated host's real
address.

Recommendation:
    When not on the same interface as the host undergoing NAT, use the mapped address
instead of the real address to connect to the host. Also, enable the appropriate inspect
command if the application embeds IP address.

Syslogs:
    305005


----------------------------------------------------------------
Name: no-ipv6-ipsec
```

```
IPSec over IPv6 unsupported:
    This counter will increment when the appliance receives an IPSec ESP packet, IPSec
NAT-T ESP packet or an IPSec over UDP ESP packet encapsulated in an IP version 6 header.
The appliance does not currently support any IPSec sessions encapsulated in IP version 6.

Recommendation:
    None

Syslogs:
    None


------------------------------------------------------------------
Name: tunnel-pending
Tunnel being brought up or torn down:
    This counter will increment when the appliance receives a packet matching an entry in
the security policy database (i.e. crypto map) but the security association is in the
process of being negotiated; its not complete yet.

    This counter will also increment when the appliance receives a packet matching an
entry in the security policy database but the security association has been or is in the
process of being deleted. The difference between this indication and the 'Tunnel has been
torn down' indication is that the 'Tunnel has been torn down' indication is for
established flows.

Recommendation:
    This is a normal condition when the IPSec tunnel is in the process of being negotiated
or deleted.

Syslogs:
    None


------------------------------------------------------------------
Name: need-ike
Need to start IKE negotiation:
    This counter will increment when the appliance receives a packet which requires
encryption but has no established IPSec security association. This is generally a normal
condition for LAN-to-LAN IPSec configurations. This indication will cause the appliance to
begin ISAKMP negotiations  with the destination peer.

Recommendation:
    If you have configured IPSec LAN-to-LAN on your appliance, this indication is normal
and does not indicate a problem.  However, if this counter increments rapidly it may
indicate a crypto configuration error or network error preventing the ISAKMP negotiation
from completing.

    Verify that you can communicate with the destination peer and verify your crypto
configuration via the 'show running-config' command.

Syslogs:
    None


------------------------------------------------------------------
Name: vpn-handle-error
VPN handle error:
    This counter is incremented when the appliance is unable to create a VPN handle
because the VPN handle already exists.

Recommendation:
```

```
    It is possible to see this counter increment as part of normal operation. However, if
the counter is rapidly incrementing and there is a major malfunction of vpn-based
applications, then this may be caused by a software defect. Use the following command sto
gather more information about this counter and ontact the Cisco TAC to investigate the
issue further.

    capture <name> type asp-drop vpn-handle-error
    show asp table classify crypto
    show asp table vpn-context detail

Syslogs:
    None


----------------------------------------------------------------
Name: vpn-handle-not-found
VPN handle not found:
    This counter is incremented when a datagram hits an encrypt or decrypt rule, and no
VPN handle is found for the flow the datagram is on.

Recommendation:
    It is possible to see this counter increment as part of normal operation. However, if
the counter is rapidly incrementing and there is a major malfunction of vpn-based
applications, then this may be caused by a software defect. Use the following command sto
gather more information about this counter and ontact the Cisco TAC to investigate the
issue further.

    capture <name> type asp-drop vpn-handle-not-found
    show asp table classify crypto
    show asp table vpn-context detail

Syslogs:
    None


----------------------------------------------------------------
Name: inspect-fail
Inspection failure:
    This counter will increment when the appliance fails to enable protocol inspection
carried out by the NP for the connection. The cause could be memory allocation failure, or
for ICMP error message, the appliance not being able to find any established connection
related to the frame embedded in the ICMP error message.

Recommendation:
    Check system memory usage.  For ICMP error message, if the cause is an attack, you can
deny the host using the ACLs.

Syslogs:
    313004 for ICMP error.


----------------------------------------------------------------
Name: no-inspect
Failed to allocate inspection:
    This counter will increment when the security appliance fails to allocate a run-time
inspection data structure upon connection creation. The connection will be dropped.

Recommendation:
    This error condition is caused when the security appliance runs out of system memory.
Please check the current available free memory by executing the "show memory" command.

Syslogs:
    None
```

```
----------------------------------------------------------------
Name: reset-by-ips
Flow reset by IPS:
    This reason is given for terminating a TCP flow as requested by IPS module.

Recommendations:
    Check syslogs and alerts on IPS module.

Syslogs:
    420003


----------------------------------------------------------------
Name: flow-reclaimed
Non-tcp/udp flow reclaimed for new request:
    This counter is incremented when a reclaimable flow is removed to make room for a new
flow.  This occurs only when the number of flows through the appliance equals the maximum
number permitted by the software imposed limit, and a new flow request is received. When
this occurs, if the number of reclaimable flows exceeds the number of VPN tunnels
permitted by the appliance, then the oldest reclaimable flow is removed to make room for
the new flow.  All flows except the following are deemed to be reclaimable:
    1. TCP, UDP, GRE and Failover flows
    2. ICMP flows if ICMP stateful inspection is enabled
    3. ESP flows to the appliance

Recommendation:
    No action is required if this counter is incrementing slowly. If this counter is
incrementing rapidly, it could mean that the appliance is under attack and the appliance
is spending more time reclaiming and rebuilding flows.

Syslogs
    302021


----------------------------------------------------------------
Name: non_tcp_syn
non-syn TCP:
    This reason is given for terminating a TCP flow when the first packet is not a SYN
packet.

Recommendations:
    None

Syslogs:
    None


----------------------------------------------------------------
Name: ipsec-spoof-detect
IPSec spoof packet detected:
    This counter will increment when the appliance receives a packet which should have
been encrypted but was not.  The packet matched the inner header security policy check of
a configured and established IPSec connection on the appliance but was received
unencrypted.  This is a security issue.

Recommendation:
    Analyze your network traffic to determine the source of the spoofed IPSec traffic.

Syslogs:
    402117


----------------------------------------------------------------
```

```
Name: rm-xlate-limit
RM xlate limit reached:
    This counter is incremented when the maximum number of xlates for a context or the
system has been reached and a new connection is attempted.

 Recommendation:
    The device administrator can use the commands 'show resource usage' and 'show resource
usage system' to view context and system resource limits and 'Denied' counts and adjust
resource limits if desired.

 Syslogs:
    321001


----------------------------------------------------------------
Name: rm-host-limit
RM host limit reached:
    This counter is incremented when the maximum number of hosts for a context or the
system has been reached and a new connection is attempted.

 Recommendation:
    The device administrator can use the commands 'show resource usage' and 'show resource
usage system' to view context and system resource limits and 'Denied' counts and adjust
resource limits if desired.

 Syslogs:
    321001


----------------------------------------------------------------
Name: rm-inspect-rate-limit
RM inspect rate limit reached:
    This counter is incremented when the maximum inspection rate for a context or the
system has been reached and a new connection is attempted.

 Recommendation:
    The device administrator can use the commands 'show resource usage' and 'show resource
usage system' to view context and system resource limits and 'Denied' counts and adjust
resource limits if desired.

 Syslogs:
    321002


----------------------------------------------------------------
Name: tcpmod-connect-clash
A TCP connect socket clashes with an existing listen connection.  This is an internal
system error.  Contact TAC.

----------------------------------------------------------------
Name: svc-spoof-detect
SVC spoof packet detected:
    This counter will increment when the security appliance receives a packet which should
have been encrypted but was not. The packet matched the inner header security policy check
of a configured and established SVC connection on the security appliance but was received
unencrypted. This is a security issue.

Recommendation:
    Analyze your network traffic to determine the source of the spoofed SVC traffic.

Syslogs:
    None
```

```
----------------------------------------------------------------
Name: ssm-app-request
Flow terminated by service module:
    This counter only applies to the ASA 5500 series adaptive security appliance. It is
incremented when the application running on the SSM requests the security appliance to
terminate a connection.

Recommendation:
    You can obtain more information by querying the incident report or system messages
generated by the SSM itself. Please consult the documentation that comes with comes with
the SSM for instructions.

Syslogs:
    None.


----------------------------------------------------------------
Name: ssm-app-fail
Service module failed:
    This counter only applies to the ASA 5500 series adaptive security appliance. It is
incremented when a connection that is being inspected by the SSM is terminated because the
SSM has failed.

Recommendation:
    The card manager process running in the security appliance control plane issued system
messages and CLI warning to inform you of the failure. Please consult the documentation
that comes with the SSM to trouble shoot the SSM failure. Contact Cisco Technical
Assistance Center (TAC) if needed.

Syslog:
    421001.


----------------------------------------------------------------
Name: ssm-app-incompetent
Service module incompetent:
    This counter only applies to the ASA 5500 series adaptive security appliance. It is
incremented when a connection is supposed to be inspected by the SSM, but the SSM is not
able to inspect it. This counter is reserved for future use. It should always be 0 in the
current release.

Recommendation:
    None.

Syslog:
    None.


----------------------------------------------------------------
Name: ssl-bad-record-detect
SSL bad record detected:
    This counter is incremented for each unknown SSL record type received from the remote
peer. Any unknown record type received from the peer is treated as a fatal error and the
SSL connections that encounter this error must be terminated.

Recommendation:
    It is not normal to see this counter increment at any time. If this counter is
incremented, it usually means that the SSL protocol state is out of sync with the client
software. The most likely cause of this problem is a software defect in the client
software.  Contact the Cisco TAC with the client software or web browser version and
provide a network trace of the SSL data exchange to troubleshoot this problem.

Syslogs:
    None.
```

```
----------------------------------------------------------------
Name: ssl-handshake-failed
SSL handshake failed:
    This counter is incremented when the TCP connection is dropped because the SSL
handshake failed.

Recommendation:
    This is to indicate that the TCP connection is dropped because the SSL handshake
failed. If the problem cannot be resolved based on the syslog information generated by the
handshake failure condition, please include the related syslog information when contacting
the Cisco TAC.

Syslogs:
    725006.
    725014.


----------------------------------------------------------------
Name: ssl-malloc-error
SSL malloc error:
    This counter is incremented for each malloc failure that occurs in the SSL lib.  This
is to indicate that SSL encountered a low memory condition where it can't allocate a
memory buffer or packet block.

Recommendation:
    Check the security appliance memory and packet block condition and contact Cisco the
TAC with this memory information.

Syslogs:
    None.


----------------------------------------------------------------
Name: ctm-crypto-request-error
CTM crypto request error:
    This counter is incremented each time CTM cannot accept our crypto request.  This
usually means the crypto hardware request queue is full.

Recommendation:
    Issue the show crypto protocol statistics ssl command and contact the Cisco TAC with
this information.

Syslogs:
    None.


----------------------------------------------------------------
Name: ssl-record-decrypt-error
SSL record decryption failed:
    This counter is incremented when a decryption error occurs during SSL data receive.
This usually means that there is a bug in the SSL code of the ASA or peer, or an attacker
may be modifying the data stream. The SSL connection has been closed.

Recommendation:
    Investigate the SSL data streams to and from your ASA. If there is no attacker, then
this indicates a software error that should be reported to the Cisco TAC.

Syslogs:
    None.


----------------------------------------------------------------
```

```
Name: np-socket-conn-not-accepted
A new socket connection was not accepted:
    This counter is incremented for each new socket connection that is not accepted by the
security appliance.

Recommendation:
    It is possible to see this counter increment as part of normal operation. However, if
the counter is rapidly incrementing and there is a major malfunction of socket-based
applications, then this may be caused by a software defect. Contact the Cisco TAC to
investigate the issue further.

Syslog:
    None.


----------------------------------------------------------------
Name: np-socket-failure
NP socket failure:
    This is a general counter for critical socket processing errors.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslog:
    None.


----------------------------------------------------------------
Name: np-socket-data-move-failure
NP socket data movement failure:
    This counter is incremented for socket data movement errors.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslog:
    None.


----------------------------------------------------------------
Name: np-socket-new-conn-failure
NP socket new connection failure:
    This counter is incremented for new socket connection failures.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslog:
    None.


----------------------------------------------------------------
Name: np-socket-transport-closed
NP socket transport closed:
    This counter is incremented when the transport attached to the socket is abruptly
closed.

Recommendation:
    It is possible to see this counter increment as part of normal operation. However, if
the counter is rapidly incrementing and there is a major malfunction of socket-based
applications, then this may be caused by a software defect. Contact the Cisco TAC to
investigate the issue further.

Syslog:
```

```
    None.


----------------------------------------------------------------
Name: np-socket-block-conv-failure
NP socket block conversion failure:
    This counter is incremented for socket block conversion failures.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslog:
    None.


----------------------------------------------------------------
Name: ssl-received-close-alert
SSL received close alert:
    This counter is incremented each time the security appliance receives a close alert
from the remote client.  This indicates that the client has notified us they are going to
drop the connection.  It is part of the normal disconnect process.

Recommendation:
    None.

Syslog:
    725007.


----------------------------------------------------------------
Name: svc-failover
An SVC socket connection is being disconnected on the standby unit:
    This counter is incremented for each new SVC socket connection that is disconnected
when the active unit is transitioning into standby state as part of a failover transition.

Recommendation:
    None. This is part of a normal cleanup of a SVC connection when the current device is
transitioning from active to standby. Existing SVC connections on the device are no longer
valid and need to be removed.

Syslogs:
    None.


----------------------------------------------------------------
Name: children-limit
Max per-flow children limit exceeded:
    The number of children flows associated with one parent flow exceeds the internal
limit of 200.

Recommendation:
    This message indicates either a misbehaving application or an active attempt to
exhaust the firewall memory.  Use "set connection per-client-max" command to further fine
tune the limit.  For FTP, additionally enable the "strict" option in "inspect ftp".

Syslogs:
    210005


----------------------------------------------------------------
Name: tracer-flow
packet-tracer traced flow drop:
    This counter is internally used by packet-tracer for flow freed once tracing is
complete.
```

```
Recommendation:
    None.

Syslog:
    None.


----------------------------------------------------------------
Name: sp-looping-address
looping-address:
    This counter is incremented when the source and destination addresses in a flow are
the same.  SIP flows where address privacy is enabled are excluded, as it is normal for
those flows to have the same source and destination address.

 Recommendation:
    There are two possible conditions when this counter will increment. One is when the
appliance receives a packet with the source address equal to the destination. This
represents a type of DoS attack.  The second is when the NAT configuration of the
appliance NATs a source address to equal that of the destination.  One should examine
syslog message 106017 to determine what IP address is causing the counter to increment,
then enable packet captures to capture the offending packet, and perform additional
analysis.

 Syslogs:
    106017


----------------------------------------------------------------
Name: ipsec-selector-failure
IPSec VPN inner policy selector mismatch detected:
    This counter is incremented when an IPSec packet is received with an inner IP header
that does not match the configured policy for the tunnel.

 Recommendation:
    Verify that the crypto ACLs for the tunnel are correct and that all acceptable packets
are included in the tunnel identity.  Verify that the box is not under attack if this
message is repeatedly seen.

 Syslogs:
    402116


----------------------------------------------------------------
Name: np-midpath-service-failure
NP midpath service failure:
    This is a general counter for critical midpath service errors.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslog:
    None.


----------------------------------------------------------------
Name: svc-replacement-conn
SVC replacement connection established:
    This counter is incremented when an SVC connection is replaced by a new connection.

Recommendation:
    None. This may indicate that users are having difficulty maintaining connections to
the ASA. Users should evaluate the quality of their home network and Internet connection.
```

```
Syslog:
    722032


----------------------------------------------------------------
Name: np-midpath-cp-event-failure
NP midpath CP event failure:
    This is counter for critical midpath events that could not be sent to the CP.

Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

Syslog:
    None.


----------------------------------------------------------------
Name: np-context-removed
NP virtual context removed:
    This counter is incremented when the virtual context with which the flow is going to
be associated has been removed.  This could happen in multi-core environment when one CPU
core is in the process of destroying the virtual context, and another CPU core tries to
create a flow in the context.

Recommendation:
    No action is required.

Syslog:
    None.


----------------------------------------------------------------
Name: vpn-context-expired
Expired VPN context:
    This counter will increment when the security appliance receives a packet that
requires encryption or decryption, and the ASP VPN context required to perform the
operation is no longer valid.

 Recommendation:
    This indicates that a software error should be reported to the Cisco TAC.

 Syslogs:
    None


----------------------------------------------------------------
Name: vpn-lock-error
IPSec locking error:
    This counter is incremented when VPN flow cannot be created due to     an internal
locking error.

Recommendation:
    This condition should never be encountered during normal operation and     may
indicate a software problem with the appliance.  Contact the Cisco     Technical
Assistance Center (TAC) if this error occurs.

Syslogs:
    None.


----------------------------------------------------------------
```

Examples

The following is sample output from the **show asp drop** command, with the timestamp indicating when the last time the counters were cleared:

```
hostname# show asp drop

Frame drop:
  Flow is denied by configured rule (acl-drop)                              3
  Dst MAC L2 Lookup Failed (dst-l2_lookup-fail)                          4110
  L2 Src/Dst same LAN port (l2_same-lan-port)                             760
  Expired flow (flow-expired)                                               1

Last clearing: Never

Flow drop:
  Flow is denied by access rule (acl-drop)                                 24
  NAT failed (nat-failed)                                                28739
  NAT reverse path failed (nat-rpf-failed)                               22266
  Inspection failure (inspect-fail)                                      19433

Last clearing: 17:02:12 UTC Jan 17 2008 by enable_15
```

Related Commands

Command	Description
capture	Captures packets, including the option to capture packets based on an asp drop code.
clear asp drop	Clears drop statistics for the accelerated security path.
show conn	Shows information about connections.

show asp load-balance per-packet

To debug the accelerated security path dispatch-unit, use the **show asp load-balance per-packet** command in privileged EXEC mode. Use the **no** form of this command to remove the specified behavior for the security appliance.

show asp load-balance per-packet

[no] asp load-balance per-packet

Syntax Description

detail	(Optional) Shows detailed dispatch unit information.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
Privileged EXEC	•	•	•	—	•

Command History

Release	Modification
8.1(1)	This command was introduced.

Usage Guidelines

The **show asp load-balance per-packet** command shows detailed dispatch unit information, which might help you troubleshoot a problem. See the *Cisco Security Appliance Command Line Configuration Guide* for more information about the accelerated security path. This information is used for debugging purposes only, and the information output is subject to change. Consult Cisco TAC to help you debug your system with this command.

Examples

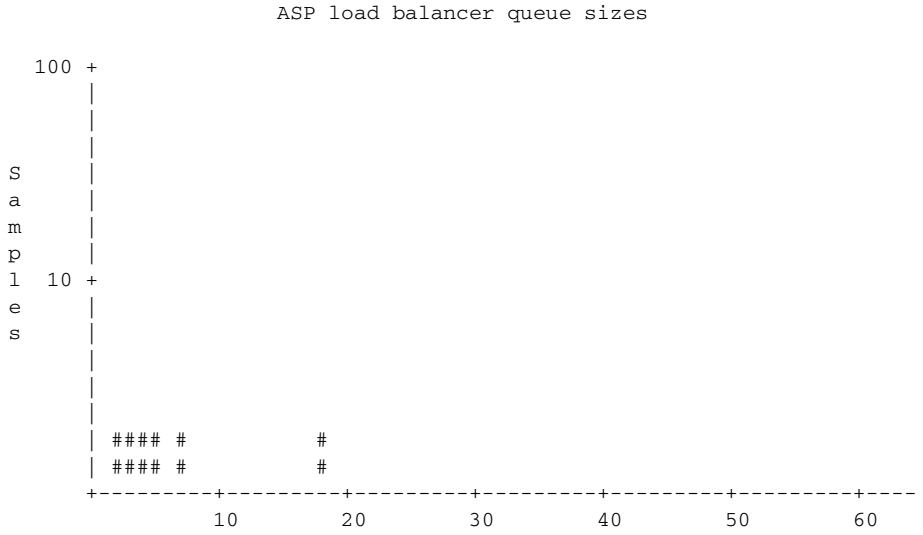
The following is sample output from the **show asp load-balance per-packet** command:

```
hostname# show asp load-balance per-packet

Histogram of 'ASP load balancer queue sizes'
  64 buckets sampling from 1 to 65 (1 per bucket)
  0 samples within range (average=0)
<no data for 'ASP load balancer queue sizes' histogram>

show asp load-balance per-packet

Histogram of 'ASP load balancer queue sizes'
  64 buckets sampling from 1 to 65 (1 per bucket)
  6 samples within range (average=6)
```



RelatedCommands

Command	Description
show blocks	Shows the system buffer utilization.

show asp multiprocessor accelerated-features

To debug the accelerated security path multiprocessor accelerate, use the **show asp multiprocessor accelerated-features** command in privileged EXEC mode.

show asp multiprocessor accelerated-features

Syntax Description

multiprocessor accelerated-features	Lists features accelerated for multiprocessors.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
8.1(1)	This command was introduced.

Usage Guidelines

The **show asp multiprocessor accelerated-features** command shows the lists of features accelerated for multiprocessors, which might help you troubleshoot a performance problem. See the *Cisco Security Appliance Command Line Configuration Guide* for more information about the accelerated security path. Consult Cisco TAC to help you debug your system with this command.

Examples

The following is sample output from the **show asp multiprocessor accelerated-features** command:

```
hostname# show asp multiprocessor accelerated-features
MultiProcessor accelerated feature list:
        Access Lists
        DNS Guard
        Failover Stateful Updates
        Flow Operations(create, update, and tear-down)
        Inspect HTTP URL Logging
        Inspect HTTP (AIC)
        Inspect IPSec Pass through
        Inspect ICMP and ICMP error
        Inspect RTP/RTCP
        IP Audit
        IP Fragmentation & Re-assembly
        MPF L2-L4 Classify
        Multicast forwarding
        NAT/PAT
```

```
        Netflow using UDP transport
        Non-AIC Inspect DNS
        Packet Capture
        QOS
        Resource Management
        Routing Lookup
        Shun
        Syslogging using UDP transport
        TCP Intercept
        TCP Security Engine
        Threat Detection
        Unicast RPF
        WCCP Re-direct
Above list applies to routed, transparent, single and multi mode.
```

Related Commands

Command	Description
show cpu core	Shows CPU usage information.
cpu profile activate	Activates the cpu profile.
show asp event dp-cp	Shows the asp event dp-cp.
show logging queue	Shows the logging queue.
show blocks	Shows the system buffer utilization.
show asp dispatch-unit detail	Shows the dispatch-unit information
show interface	Shows the interface status information

show asp table arp

To debug the accelerated security path ARP tables, use the **show asp table arp** command in privileged EXEC mode.

show asp table arp [**interface** *interface_name*] [**address** *ip_address* [**netmask** *mask*]]

Syntax Description

address *ip_address*	(Optional) Identifies an IP address for which you want to view ARP table entries.
interface *interface_name*	(Optional) Identifies a specific interface for which you want to view the ARP table.
netmask *mask*	(Optional) Sets the subnet mask for the IP address.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.

Usage Guidelines

The **show arp** command shows the contents of the control plane, while the **show asp table arp** command shows the contents of the accelerated security path, which might help you troubleshoot a problem. See the *Cisco Security Appliance Command Line Configuration Guide* for more information about the accelerated security path. These tables are used for debugging purposes only, and the information output is subject to change. Consult Cisco TAC to help you debug your system with this command.

Examples

The following is sample output from the **show asp table arp** command:

```
hostname# show asp table arp

Context: single_vf, Interface: inside
  10.86.194.50                            Active   000f.66ce.5d46 hits 0
  10.86.194.1                             Active   00b0.64ea.91a2 hits 638
  10.86.194.172                           Active   0001.03cf.9e79 hits 0
  10.86.194.204                           Active   000f.66ce.5d3c hits 0
  10.86.194.188                           Active   000f.904b.80d7 hits 0

Context: single_vf, Interface: identity
```

```
::                                      Active   0000.0000.0000 hits 0
0.0.0.0                                 Active   0000.0000.0000 hits 50208
```

Related Commands

Command	Description
show arp	Shows the ARP table.
show arp statistics	Shows ARP statistics.

show asp table classify

To debug the accelerated security path classifier tables, use the **show asp table classify** command in privileged EXEC mode. The classifier examines properties of incoming packets, such as protocol, and source and destination address, to match each packet to an appropriate classification rule. Each rule is labeled with a classification domain that determines what types of actions are performed, such as dropping a packet or allowing it through.

show asp table classify [**hit** | **crypto** | **domain** *domain_name* | **interface** *interface_name*]

Syntax Description

domain *domain_name*	(Optional) Shows entries for a specific classifier domain. See "Usage Guidelines" for a list of domains.
hits	(Optional) Shows classifier entries which have non-zero hits values
interface *interface_name*	(Optional) Identifies a specific interface for which you want to view the classifier table.
crypto	(Optional) Shows the encrypt, decrypt, and ipsec tunnel flow domains only.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.
7.2(4)	Added the **hits** option, and the timestamp indicating when the last time the asp table counters were cleared.
8.0(2)	A new counter was added to show the number of times a tmatch compilation was aborted. This counter is shown only if the value is greater than 0.

Usage Guidelines

The **show asp table classifier** command shows the classifier contents of the accelerated security path, which might help you troubleshoot a problem. See the *Cisco Security Appliance Command Line Configuration Guide* for more information about the accelerated security path. These tables are used for debugging purposes only, and the information output is subject to change. Consult Cisco TAC to help you debug your system with this command.

Classifier domains include the following:

```
aaa-acct
aaa-auth
```

```
aaa-user
accounting
arp
capture
capture
conn-nailed
conn-set
ctcp
decrypt
encrypt
established
filter-activex
filter-ftp
filter-https
filter-java
filter-url
host
ids
inspect
inspect-ctiqbe
inspect-dns
inspect-dns-ids
inspect-ftp
inspect-ftp-data
inspect-gtp
inspect-h323
inspect-http
inspect-icmp
inspect-icmp-error
inspect-ils
inspect-mgcp
inspect-netbios
inspect-pptp
inspect-rsh
inspect-rtsp
inspect-sip
inspect-skinny
inspect-smtp
inspect-snmp
inspect-sqlnet
inspect-sqlnet-plus
inspect-sunrpc
inspect-tftp
inspect-xdmcp
ipsec-natt
ipsec-tunnel-flow
ipsec-user
limits
lu
mac-permit
mgmt-lockdown
mgmt-tcp-intercept
multicast
nat
nat-exempt
nat-exempt-reverse
nat-reverse
null
permit
permit-ip-option
permit-log
pim
ppp
priority-q
```

```
punt
punt-l2
punt-root
qos
qos-per-class
qos-per-dest
qos-per-flow
qos-per-source
shun
tcp-intercept
```

Examples

The following is sample output from the **show asp table classify** command:

```
hostname# show asp table classify

Interface test:
No. of aborted compiles for input action table 0x33b3d70: 29
in  id=0x36f3800, priority=10, domain=punt, deny=false
        hits=0, user_data=0x0, flags=0x0
        src ip=0.0.0.0, mask=0.0.0.0, port=0
        dst ip=10.86.194.60, mask=255.255.255.255, port=0
in  id=0x33d3508, priority=99, domain=inspect, deny=false
        hits=0, user_data=0x0, use_real_addr, flags=0x0
        src ip=0.0.0.0, mask=0.0.0.0, port=0
        dst ip=0.0.0.0, mask=0.0.0.0, port=0
in  id=0x33d3978, priority=99, domain=inspect, deny=false
        hits=0, user_data=0x0, use_real_addr, flags=0x0
        src ip=0.0.0.0, mask=0.0.0.0, port=53
        dst ip=0.0.0.0, mask=0.0.0.0, port=0
...
```

The following is sample output from the **show asp table classify hits** command with a record of the last clearing hits counters:

```
Interface mgmt:
in id=0x494cd88, priority=210, domain=permit, deny=true
       hits=54, user_data=0x1, cs_id=0x0, reverse, flags=0x0, protocol=0 src ip=0.0.0.0,
       mask=0.0.0.0, port=0 dst ip=255.255.255.255, mask=255.255.255.255, port=0,
       dscp=0x0
in id=0x494d1b8, priority=112, domain=permit, deny=false
       hits=1, user_data=0x0, cs_id=0x0, reverse, flags=0x0, protocol=1 src ip=0.0.0.0,
       mask=0.0.0.0, port=0 dst ip=0.0.0.0, mask=0.0.0.0, port=0, dscp=0x0

Interface inside:
in id=0x48f1580, priority=210, domain=permit, deny=true
       hits=54, user_data=0x1, cs_id=0x0, reverse, flags=0x0, protocol=0 src ip=0.0.0.0,
       mask=0.0.0.0, port=0 dst ip=255.255.255.255, mask=255.255.255.255, port=0,
       dscp=0x0
in id=0x48f09e0, priority=1, domain=permit, deny=false
       hits=101, user_data=0x0, cs_id=0x0, l3_type=0x608 src mac=0000.0000.0000,
       mask=0000.0000.0000 dst mac=0000.0000.0000, mask=0000.0000.0000
Interface outside:
in id=0x48c0970, priority=210, domain=permit, deny=true
       hits=54, user_data=0x1, cs_id=0x0, reverse, flags=0x0, protocol=0 src ip=0.0.0.0,
       mask=0.0.0.0, port=0 dst ip=255.255.255.255, mask=255.255.255.255, port=0,
       dscp=0x0
```

Related Commands

Command	Description
show asp drop	Shows the accelerated security path counters for dropped packets.

show asp table interfaces

To debug the accelerated security path interface tables, use the **show asp table interfaces** command in privileged EXEC mode.

show asp table interfaces

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.

Usage Guidelines

The **show asp table interfaces** command shows the interface table contents of the accelerated security path, which might help you troubleshoot a problem. See the *Cisco Security Appliance Command Line Configuration Guide* for more information about the accelerated security path. These tables are used for debugging purposes only, and the information output is subject to change. Consult Cisco TAC to help you debug your system with this command.

Examples

The following is sample output from the **show asp table interfaces** command:

```
hostname# show asp table interfaces

** Flags: 0x0001-DHCP, 0x0002-VMAC, 0x0010-Ident Ifc, 0x0020-HDB Initd,
   0x0040-RPF Enabled
Soft-np interface 'dmz' is up
    context single_vf, nicnum 0, mtu 1500
        vlan 300, Not shared, seclvl 50
        0 packets input, 1 packets output
        flags 0x20

Soft-np interface 'foo' is down
    context single_vf, nicnum 2, mtu 1500
        vlan <None>, Not shared, seclvl 0
        0 packets input, 0 packets output
        flags 0x20
```

```
Soft-np interface 'outside' is down
    context single_vf, nicnum 1, mtu 1500
        vlan <None>, Not shared, seclvl 50
        0 packets input, 0 packets output
        flags 0x20

Soft-np interface 'inside' is up
    context single_vf, nicnum 0, mtu 1500
        vlan <None>, Not shared, seclvl 100
        680277 packets input, 92501 packets output
        flags 0x20
...
```

Related Commands

Command	Description
interface	Configures an interface and enters interface configuration mode.
show interface	Displays the runtime status and statistics of interfaces.

show asp table routing

To debug the accelerated security path routing tables, use the **show asp table routing** command in privileged EXEC mode. This command supports IPv4 and IPv6 addresses.

show asp table routing [**input** | **output**] [**address** *ip_address* [**netmask** *mask*] | **interface** *interface_name*]

Syntax Description

address *ip_address*	Sets the IP address for which you want to view routing entries. For IPv6 addresses, you can include the subnet mask as a slash (/) followed by the prefix (0 to 128). For example, enter the following: `fe80::2e0:b6ff:fe01:3b7a/128`
input	Shows the entries from the input route table.
interface *interface_name*	(Optional) Identifies a specific interface for which you want to view the routing table.
netmask *mask*	For IPv4 addresses, specifies the subnet mask.
output	Shows the entries from the output route table.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.

Usage Guidelines

The **show asp table routing** command shows the routing table contents of the accelerated security path, which might help you troubleshoot a problem. See the *Cisco Security Appliance Command Line Configuration Guide* for more information about the accelerated security path. These tables are used for debugging purposes only, and the information output is subject to change. Consult Cisco TAC to help you debug your system with this command.

Examples

The following is sample output from the **show asp table routing** command:

```
hostname# show asp table routing

in   255.255.255.255 255.255.255.255 identity
```

```
in   224.0.0.9       255.255.255.255 identity
in   10.86.194.60    255.255.255.255 identity
in   10.86.195.255   255.255.255.255 identity
in   10.86.194.0     255.255.255.255 identity
in   209.165.202.159 255.255.255.255 identity
in   209.165.202.255 255.255.255.255 identity
in   209.165.201.30  255.255.255.255 identity
in   209.165.201.0   255.255.255.255 identity
in   10.86.194.0     255.255.254.0   inside
in   224.0.0.0       240.0.0.0       identity
in   0.0.0.0         0.0.0.0         inside
out  255.255.255.255 255.255.255.255 foo
out  224.0.0.0       240.0.0.0       foo
out  255.255.255.255 255.255.255.255 test
out  224.0.0.0       240.0.0.0       test
out  255.255.255.255 255.255.255.255 inside
out  10.86.194.0     255.255.254.0   inside
out  224.0.0.0       240.0.0.0       inside
out  0.0.0.0         0.0.0.0         via 10.86.194.1, inside
out  0.0.0.0         0.0.0.0         via 0.0.0.0, identity
out  ::              ::              via 0.0.0.0, identity
```

Related Commands

Command	Description
show route	Shows the routing table in the control plane.

show asp table socket

To debug the accelerated security path socket information, use the **show asp table socket** command in privileged EXEC mode.

show asp table socket

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
8.0(1)	This command was introduced.

Usage Guidelines

The **show asp table socket** command lets you debug the accelerated security path socket information.

Examples

This is an example of the the **show asp table socket** command:

```
Protocol  Socket    Local Address             Foreign Address         State
TCP       00012bac  10.86.194.224:23          0.0.0.0:*               LISTEN
TCP       0001c124  10.86.194.224:22          0.0.0.0:*               LISTEN
SSL       00023b84  10.86.194.224:443         0.0.0.0:*               LISTEN
SSL       0002d01c  192.168.1.1:443           0.0.0.0:*               LISTEN
DTLS      00032b1c  10.86.194.224:443         0.0.0.0:*               LISTEN
SSL       0003a3d4  0.0.0.0:443               0.0.0.0:*               LISTEN
DTLS      00046074  0.0.0.0:443               0.0.0.0:*               LISTEN
TCP       02c08aec  10.86.194.224:22          171.69.137.139:4190     ESTAB
```

Related Commands

Command	Description
show asp table vpn-context	Debugs the accelerated security path VPN context tables.

show asp table vpn-context

To debug the accelerated security path VPN context tables, use the **show asp table vpn-context** command in privileged EXEC mode.

show asp table vpn-context [**detail**]

Syntax Description

detail	(Optional) Shows additional detail for the VPN context tables.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.

Usage Guidelines

The **show asp table vpn-context** command shows the VPN context contents of the accelerated security path, which might help you troubleshoot a problem. See the *Cisco Security Appliance Command Line Configuration Guide* for more information about the accelerated security path. These tables are used for debugging purposes only, and the information output is subject to change. Consult Cisco TAC to help you debug your system with this command.

Examples

The following is sample output from the **show asp table vpn-context** command:

```
hostname# show asp table vpn-context

VPN ID=0058070576, DECR+ESP, UP, pk=0000000000, rk=0000000000, gc=0
VPN ID=0058193920, ENCR+ESP, UP, pk=0000000000, rk=0000000000, gc=0
VPN ID=0058168568, DECR+ESP, UP, pk=0000299627, rk=0000000061, gc=2
VPN ID=0058161168, ENCR+ESP, UP, pk=0000305043, rk=0000000061, gc=1
VPN ID=0058153728, DECR+ESP, UP, pk=0000271432, rk=0000000061, gc=2
VPN ID=0058150440, ENCR+ESP, UP, pk=0000285328, rk=0000000061, gc=1
VPN ID=0058102088, DECR+ESP, UP, pk=0000268550, rk=0000000061, gc=2
VPN ID=0058134088, ENCR+ESP, UP, pk=0000274673, rk=0000000061, gc=1
VPN ID=0058103216, DECR+ESP, UP, pk=0000252854, rk=0000000061, gc=2
...
```

The following is sample output from the **show asp table vpn-context detail** command:

```
hostname# show asp table vpn-context detail
```

```
VPN Ctx  = 0058070576 [0x03761630]
State    = UP
Flags    = DECR+ESP
SA       = 0x037928F0
SPI      = 0xEA0F21F0
Group    = 0
Pkts     = 0
Bad Pkts = 0
Bad SPI  = 0
Spoof    = 0
Bad Crypto = 0
Rekey Pkt  = 0
Rekey Call = 0

VPN Ctx  = 0058193920 [0x0377F800]
State    = UP
Flags    = ENCR+ESP
SA       = 0x037B4B70
SPI      = 0x900FDC32
Group    = 0
Pkts     = 0
Bad Pkts = 0
Bad SPI  = 0
Spoof    = 0
Bad Crypto = 0
Rekey Pkt  = 0
Rekey Call = 0
...
```

Related Commands

Command	Description
show asp drop	Shows the accelerated security path counters for dropped packets.

show blocks

To show the packet buffer utilization, use the **show blocks** command in privileged EXEC mode.

show blocks [core | interface]

show blocks [{address hex **| all | assigned| free| old | pool** *size* **[summary]}] [diagnostics | dump | exhaustion snapshot | header | packet]**

show blocks old core-local [core_number] **[diagnostics |dump | header | packet]**

show blocks queue history [detail]

show blocks queue history core-local [core_number] **[detail]**

Syntax Description

address *hex*	(Optional) Shows a block corresponding to this address, in hexadecimal.
all	(Optional) Shows all blocks.
assigned	(Optional) Shows blocks that are assigned and in use by an application.
core	(Optional) Shows usage on buffers attached to cores.
detail	(Optional) Shows a portion (128 bytes) of the first block for each unique queue type.
dump	(Optional) Shows the entire block contents, including the header and packet information. The difference between dump and packet is that dump includes additional information between the header and the packet.
diagnostics	(Optional) Shows block diagnostics.
exhaustion snapshot	(Optional) Shows details describing the last instance of a complete exhaustion of any block size
free	(Optional) Shows blocks that are available for use.
header	(Optional) Shows the header of the block.
interface	(Optional) Shows usage on buffers attached to interfaces.
old	(Optional) Shows blocks that were assigned more than a minute ago.
packet	(Optional) Shows the header of the block as well as the packet contents.
pool *size*	(Optional) Shows blocks of a specific size.
queue history	(Optional) Shows where blocks are assigned when the security appliance runs out of blocks. Sometimes, a block is allocated from the pool but never assigned to a queue. In that case, the location is the code address that allocated the block.
summary	(Optional) Shows detailed information about block usage sorted by the program addresses of applications that allocated blocks in this class, program addresses of applications that released blocks in this class, and the queues to which valid blocks in this class belong.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
				Multiple	
	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	The **pool summary** option was added.
8.0(2)	The dupb block uses 0 length blocks now instead of 4 byte blocks. An additional line was added for 0 byte blocks.
8.1	The **core**, **interface** and **exhaustion snapshot** options were added.

Usage Guidelines

The **show blocks** command helps you determine if the security appliance is overloaded. This command lists preallocated system buffer utilization. A full memory condition is not a problem as long as traffic is moving through the security appliance. You can use the **show conn** command to see if traffic is moving. If traffic is not moving and the memory is full, there may be a problem.

You can also view this information using SNMP.

The information shown in a security context includes the system-wide information as well as context-specific information about the blocks in use and the high water mark for block usage.

See the "Examples" section for a description of the display output.

Examples

The following is sample output from the **show blocks** command in single mode:

```
hostname# show blocks
  SIZE    MAX    LOW    CNT
     0    100     99    100
     4   1600   1598   1599
    80    400    398    399
   256   3600   3540   3542
  1550   4716   3177   3184
 16384     10     10     10
  2048   1000   1000   1000
```

Table 25-1 shows each field description.

Table 25-1 show blocks Fields

Field	Description
SIZE	Size, in bytes, of the block pool. Each size represents a particular type. Examples are shown below.
0	Used by dupb blocks.
4	Duplicates existing blocks in applications such as DNS, ISAKMP, URL filtering, uauth, TFTP, and TCP modules. Also, this sized block can be used normally by code to send packets to drivers, etc.

Table 25-1 show blocks Fields (continued)

Field	Description
80	Used in TCP intercept to generate acknowledgment packets and for failover hello messages.
256	Used for Stateful Failover updates, syslogging, and other TCP functions. These blocks are mainly used for Stateful Failover messages. The active security appliance generates and sends packets to the standby security appliance to update the translation and connection table. In bursty traffic, where high rates of connections are created or torn down, the number of available blocks might drop to 0. This situation indicates that one or more connections were not updated to the standby security appliance. The Stateful Failover protocol catches the missing translation or connection the next time. If the CNT column for 256-byte blocks stays at or near 0 for extended periods of time, then the security appliance is having trouble keeping the translation and connection tables synchronized because of the number of connections per second that the security appliance is processing. Syslog messages sent out from the security appliance also use the 256-byte blocks, but they are generally not released in such quantity to cause a depletion of the 256-byte block pool. If the CNT column shows that the number of 256-byte blocks is near 0, ensure that you are not logging at Debugging (level 7) to the syslog server. This is indicated by the logging trap line in the security appliance configuration. We recommend that you set logging at Notification (level 5) or lower, unless you require additional information for debugging purposes.
1550	Used to store Ethernet packets for processing through the security appliance. When a packet enters a security appliance interface, it is placed on the input interface queue, passed up to the operating system, and placed in a block. The security appliance determines whether the packet should be permitted or denied based on the security policy and processes the packet through to the output queue on the outbound interface. If the security appliance is having trouble keeping up with the traffic load, the number of available blocks will hover close to 0 (as shown in the CNT column of the command output). When the CNT column is zero, the security appliance attempts to allocate more blocks, up to a maximum of 8192. If no more blocks are available, the security appliance drops the packet.
16384	This sized blocks are used by the 1 Gbps NIC driver when jumbo frame support is enabled.
9216	This is used by 10GE NIC driver when jumbo frame is enabled.
2048	Control or guided frames used for control updates.
MAX	Maximum number of blocks available for the specified byte block pool. The maximum number of blocks are carved out of memory at bootup. Typically, the maximum number of blocks does not change. The exception is for the 256- and 1550-byte blocks, where the security appliance can dynamically create more when needed, up to a maximum of 8192.
LOW	Low-water mark. This number indicates the lowest number of this size blocks available since the security appliance was powered up, or since the last clearing of the blocks (with the **clear blocks** command). A zero in the LOW column indicates a previous event where memory was full.
CNT	Current number of blocks available for that specific size block pool. A zero in the CNT column means memory is full now.

The following is sample output from the **show blocks all** command:

```
hostname# show blocks all
Class 0, size 4
     Block   allocd_by    freed_by  data size    alloccnt     dup_cnt  oper location
0x01799940  0x00000000  0x00101603          0           0           0 alloc not_specified
0x01798e80  0x00000000  0x00101603          0           0           0 alloc not_specified
0x017983c0  0x00000000  0x00101603          0           0           0 alloc not_specified

...

    Found 1000 of 1000 blocks
    Displaying 1000 of 1000 blocks
```

Table 25-2 shows each field description.

Table 25-2 show blocks all Fields

Field	Description
Block	The block address.
allocd_by	The program address of the application that last used the block (0 if not used).
freed_by	The program address of the application that last released the block.
data size	The size of the application buffer/packet data that is inside the block.
alloccnt	The number of times this block has been used since the block came into existence.
dup_cnt	The current number of references to this block if used: 0 means 1 reference, 1 means 2 references.
oper	One of the four operations that was last performed on the block: alloc, get, put, or free.
location	The application that uses the block, or the program address of the application that last allocated the block (same as the allocd_by field).

The following is sample output from the **show blocks** command in a context:

```
hostname/contexta# show blocks
  SIZE    MAX    LOW    CNT  INUSE   HIGH
     4   1600   1599   1599      0      0
    80    400    400    400      0      0
   256   3600   3538   3540      0      1
  1550   4616   3077   3085      0      0
```

The following is sample output from the **show blocks queue history** command:

```
hostname# show blocks queue history
Each Summary for User and Queue_type is followed its top 5 individual queues
Block Size: 4
Summary for User "http", Queue "tcp_unp_c_in", Blocks 1595, Queues 1396
Blk_cnt Q_cnt Last_Op Queue_Type        User      Context
    186     1 put                               contexta
     15     1 put                               contexta
      1     1 put                               contexta
      1     1 put                               contextb
      1     1 put                               contextc
Summary for User "aaa", Queue "tcp_unp_c_in", Blocks 220, Queues 200
Blk_cnt Q_cnt Last_Op Queue_Type        User      Context
     21     1 put                               contexta
      1     1 put                               contexta
      1     1 put                               contexta
      1     1 put                               contextb
      1     1 put                               contextc
Blk_cnt Q_cnt Last_Op Queue_Type        User      Context
```

```
    200     1 alloc   ip_rx             tcp       contexta
    108     1 get     ip_rx             udp       contexta
     85     1 free    fixup             h323_ras  contextb
     42     1 put     fixup             skinny    contextb

Block Size: 1550
Summary for User "http", Queue "tcp_unp_c_in", Blocks 1595, Queues 1000
Blk_cnt Q_cnt Last_Op Queue_Type        User      Context
    186     1 put                               contexta
     15     1 put                               contexta
      1     1 put                               contexta
      1     1 put                               contextb
      1     1 put                               contextc
...
```

The following is sample output from the **show blocks queue history detail** command:

```
hostname# show blocks queue history detail
History buffer memory usage: 2136 bytes (default)
Each Summary for User and Queue type is followed its top 5 individual queues
Block Size: 4
Summary for User "http", Queue_Type "tcp_unp_c_in", Blocks 1595, Queues 1396
Blk_cnt Q_cnt Last_Op Queue_Type        User      Context
    186     1 put                               contexta
     15     1 put                               contexta
      1     1 put                               contexta
      1     1 put                               contextb
      1     1 put                               contextc
 First Block information for Block at 0x.....
  dup_count 0, flags 0x8000000, alloc_pc 0x43ea2a,
  start_addr 0xefb1074, read_addr 0xefb118c, write_addr 0xefb1193
  urgent_addr 0xefb118c, end_addr 0xefb17b2
  0efb1150: 00 00 00 03 47 c5 61 c5 00 05 9a 38 76 80 a3 00  |  ....G.a....8v...
  0efb1160: 00 0a 08 00 45 00 05 dc 9b c9 00 00 ff 06 f8 f3  |  ....E...........
  0efb1170: 0a 07 0d 01 0a 07 00 50 00 17 cb 3d c7 e5 60 62  |  .......P...=..`b
  0efb1180: 7e 73 55 82 50 18 10 00 45 ca 00 00 2d 2d 20 49  |  ~sU.P...E...-- I
  0efb1190: 50 20 2d 2d 0d 0a 31 30 2e 37 2e 31 33 2e 31 09  |  P --..10.7.13.1.
  0efb11a0: 3d 3d 3e 09 31 30 2e 37 2e 30 2e 38 30 0d 0a 0d  |  ==>.10.7.0.80...

Summary for User "aaa", Queue "tcp_unp_c_in", Blocks 220, Queues 200
Blk_cnt Q_cnt Last_Op Queue_Type        User      Context
     21     1 put                               contexta
      1     1 put                               contexta
      1     1 put                               contexta
      1     1 put                               contextb
      1     1 put                               contextc
 First Block information for Block at 0x.....
  dup_count 0, flags 0x8000000, alloc_pc 0x43ea2a,
  start_addr 0xefb1074, read_addr 0xefb118c, write_addr 0xefb1193
  urgent_addr 0xefb118c, end_addr 0xefb17b2
  0efb1150: 00 00 00 03 47 c5 61 c5 00 05 9a 38 76 80 a3 00  |  ....G.a....8v...
  0efb1160: 00 0a 08 00 45 00 05 dc 9b c9 00 00 ff 06 f8 f3  |  ....E...........
  0efb1170: 0a 07 0d 01 0a 07 00 50 00 17 cb 3d c7 e5 60 62  |  .......P...=..`b
  0efb1180: 7e 73 55 82 50 18 10 00 45 ca 00 00 2d 2d 20 49  |  ~sU.P...E...-- I
  0efb1190: 50 20 2d 2d 0d 0a 31 30 2e 37 2e 31 33 2e 31 09  |  P --..10.7.13.1.
  0efb11a0: 3d 3d 3e 09 31 30 2e 37 2e 30 2e 38 30 0d 0a 0d  |  ==>.10.7.0.80...
...

total_count: total buffers in this class
```

The following is sample output from the **show blocks pool summary** command:

```
hostname# show blocks pool 1550 summary
Class 3, size 1550
```

```
================================================
         total_count=1531    miss_count=0
Alloc_pc        valid_cnt       invalid_cnt
0x3b0a18        00000256        00000000
         0x01ad0760 0x01acfe00 0x01acf4a0 0x01aceb40 00000000 0x00000000
0x3a8f6b        00001275        00000012
         0x05006aa0 0x05006140 0x050057e0 0x05004520 00000000
0x00000000

================================================
         total_count=9716    miss_count=0
Freed_pc        valid_cnt       invalid_cnt
0x9a81f3        00000104        00000007
         0x05006140 0x05000380 0x04fffa20 0x04ffde00 00000000 0x00000000
0x9a0326        00000053        00000033
         0x05006aa0 0x050057e0 0x05004e80 0x05003260 00000000 0x00000000
0x4605a2        00000005        00000000
         0x04ff5ac0 0x01e8e2e0 0x01e2eac0 0x01e17d20 00000000 0x00000000
...
================================================
         total_count=1531    miss_count=0
Queue   valid_cnt       invalid_cnt
0x3b0a18        00000256        00000000  Invalid Bad qtype
         0x01ad0760 0x01acfe00 0x01acf4a0 0x01aceb40 00000000 0x00000000
0x3a8f6b        00001275        00000000  Invalid Bad qtype
         0x05006aa0 0x05006140 0x050057e0 0x05004520 00000000
0x00000000

================================================
free_cnt=8185  fails=0  actual_free=8185  hash_miss=0
   03a8d3e0  03a8b7c0  03a7fc40  03a6ff20  03a6f5c0  03a6ec60 kao-f1#
```

Table 25-3 shows each field description.

Table 25-3 show blocks pool summary Fields

Field	Description
total_count	The number of blocks for a given class.
miss_count	The number of blocks not reported in the specified category due to technical reasons.
Freed_pc	The program addresses of applications that released blocks in this class.
Alloc_pc	The program addresses of applications that allocated blocks in this class.
Queue	The queues to which valid blocks in this class belong.
valid_cnt	The number of blocks that are currently allocated.
invalid_cnt	The number of blocks that are not currently allocated.
Invalid Bad qtype	Either this queue has been freed and the contents are invalid or this queue was never initialized.
Valid tcp_usr_conn_inp	The queue is valid.

The following is sample output from the **show blocks core** command:

```
CORE  LIMIT  ALLOC   HIGH    CNT       FAILED
   0  24576   3816   5538      3            0
   1  24576   1246   1246    728            0
```

```
   2  24576     145     145   1745            0
   3  24576      13      13   2744            0
```

Table 25-4 shows each field description.

Table 25-4 show blocks core Fields

Field	Description
CORE	core number
LIMIT	system limit for this core
ALLCO	Number of entries currently allocated (similar to MAX column in show blocks), will dynamically grow and shrink, buffers need initialization.
HIGH	High watermark for AllCO
CNT	Entries currently in cache, ready to go buffers.
FAILED	Number of attempts a block cannot be allocated due to reaching LIMIT

The following is sample output from the **show blocks interface** command:

```
Interface     SIZE  LIMIT/MAX     LOW     CNT  GLB:HELD     GLB:TOTAL
     Gi3/0    1550       1024     512     543         0             0
     Gi3/1    1550       1024     450     510         0             0
     Gi3/2    1550       1024     513     531         0             0
     Gi3/3    1550       1024     513     539         0             0
```

Table 25-5 shows each field description.

Table 25-5 show blocks interface Fields

Field	Description
Interface, GLB:HELD GLB:TOTAL	These indicate the number of blocks currently borrowed from the global pool and the cumulative total of blocks borrowed respectively. **Note** The global pool is the one displayed by the **show blocks** command.
SIZE	Size of the block used by the driver for this interface.
LIMIT	system limit for this interface.
LOW	Low-water mark. This number indicates the lowest number of this size blocks available since the security appliance was powered up, or since the last clearing of the blocks (with the **clear blocks** command). A zero in the LOW column indicates a previous event where memory was full.
CNT	Current number of blocks available in this pool for this interface.

The following is sample output from the **exhaustion snapshot** command:

```
hostname# show blocks exhaustion snapshot
Snaphot created at 10:58:17 EST Feb 22 2010:
Snapshot created due to 1550 blocks running out

LOW, CNT columns indicate interface pool blocks
GLB prefixed columns indicate global pool blocks
TXQLEN column indicates number of blocks in transmit ring
 Memory Pool  SIZE  LIMIT/MAX     LOW     CNT  GLB:HELD     GLB:TOTAL
```

```
      DMA    2048       1024      708      768         0             0
Memory Pool  SIZE  LIMIT/MAX      LOW      CNT  GLB:HELD     GLB:TOTAL
      DMA    1550       4352        0        0     19740       7929576
```

This output indicates that 1550 byte blocks reached 0 at 10:58:17 on Feb 22,2010.

Note This CLI will be available in both single and multiprocessor platforms.

Related Commands.

Command	Description
blocks	Increases the memory assigned to block diagnostics
clear blocks	Clears the system buffer statistics.
show conn	Shows active connections.
block queue history enable [size]	Jumbo-frame reservation.

show blocks core

To display the CPU usage on a per block basis, use the **show blocks core** command in privileged EXEC mode.

show blocks core

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
8.1(1)	This command was introduced.

Usage Guidelines

You can use the **show blocks core** command to show core limts on a per block basis. Information includes core limits, maximum number of entries allowed, entries currently in the cache, and the number of failed attempts that a block cannot be reached becasue the block has reached the limit.

Examples

The following example shows how to display the CPU utilization in single or muliple context mode:

```
hostname# show blocks core

CORE LIMIT  ALLOC HIGH CNT FAILED
0    4096   1024  400 1009 0
1    4096   2048  3220 124 0
2    4096   3076  4096 548 1000
3    4096   4096  4096 500 0
4    4096   4096  4096 0 0
```

Related Commands

Command	Description
show blocks interface	Displays the information of the block pool per interface.

show blocks interface

To display the CPU usage on a per interface basis, use the **show blocks interface** command in privileged EXEC mode.

show blocks interface

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
8.1(1)	This command was introduced.

Usage Guidelines

You can use the **show blocks interface** command to show core limts on a per interface basis. Information includes the specific interfaces and their limits. If there is no interface for a particular pool, the system will use a public or global pool.

Examples

The following example shows how to display the block interface information in single or muliple context mode:

```
hostname# show blocks interface
Interface    SIZE  LIMIT/MAX     LOW     CNT  GLB:HELD     GLB:TOTAL
     Ma0/0     n/a          -       -       -         -             -
     Ma0/1     n/a          -       -       -         -             -
     Gi3/0    1550       1024     512     559         0             0
     Gi3/1    1550       1024     447     474         0             0
     Gi3/2    1550       1024     512     523         0             0
     Gi3/3    1550       1024     511     551         0             0
     Gi7/0    1550       1024     513     513         0             0
     Gi7/1    1550       1024     513     513         0             0
     Gi7/2    1550       1024     513     513         0             0
     Gi7/3    1550       1024     513     513         0             0

4    4096   4096  4096 0 0
```

Related Commands

Command	Description
show blocks core	Displays the the CPU usage on a per block basis.

show bootvar

To show the boot file and configuration properties, use the **show bootvar** command in privileged EXEC mode.

show bootvar

Syntax Description

show bootvar	Displays the system boot properties.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.

Usage Guidelines

The BOOT variable specifies a list of bootable images on various devices. The CONFIG_FILE variable specifies the configuration file used during system initialization. Set these variables with the **boot system** and **boot config** commands, respectively.

Examples

In the following example, the BOOT variable contains disk0:/f1_image, which is the image that is booted when the system reloads. The current value of BOOT is disk0:/f1_image; disk0:/f1_backupimage, which means the BOOT variable has been modified with the **boot system** command; however, the running configuration has not been saved with the **write memory** command. When the running configuration is saved, the BOOT variable and current BOOT variable will both have the values of disk0:/f1_image; disk0:/f1_backupimage. If the running configuration is saved, the boot loader attempts to load the contents of the BOOT variable, starting with disk0:/f1image. If the BOOT variable is not present or invalid, the boot loader attempts to boot disk0:1/f1_backupimage.

The CONFIG_FILE variable points to the system startup configuration. In this example it is not set, so the startup configuration file is the default specified with the **boot config** command. The current CONFIG_FILE variable may be modified with the **boot config** command and saved with the **write memory** command.

```
hostname# show bootvar
BOOT variable = disk0:/f1_image
Current BOOT variable = disk0:/f1_image; disk0:/f1_backupimage
CONFIG_FILE variable =
Current CONFIG_FILE variable =
```

```
hostname#
```

Related Commands

Command	Description
boot	Specifies the configuration file or image file used at startup.

show capture

To display the capture configuration when no options are specified, use the **show capture** command.

show capture [*capture_name*] [**access-list** *access_list_name*] [**count** *number*] [**decode**] [**detail**] [**dump**] [**packet-number** *number*]

Syntax Description

capture_name	(Optional) Name of the packet capture.
access-list *access_list_name*	(Optional) Displays information for packets that are based on IP or higher fields for the specific access list identification.
count *number*	(Optional) Displays the number of packets specified data.
decode	This option is useful when a capture of type isakmp is applied to an interface. All isakmp data flowing through that interface will be captured after decryption and shown with more information after decoding the fields.
detail	(Optional) Displays additional protocol information for each packet.
dump	(Optional) Displays a hexadecimal dump of the packets that are transported over the data link transport.
packet-number *number*	Starts the display at the specified packet number.

Defaults

This command has no default settings.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.

Usage Guidelines

If you specify the *capture_name*, then the capture buffer contents for that capture are displayed.

The **dump** keyword does not display MAC information in the hexadecimal dump.

The decoded output of the packets depend on the protocol of the packet. In Table 25-6, the bracketed output is displayed when you specify the **detail** keyword.

Table 25-6 Packet Capture Output Formats

Packet Type	Capture Output Format
802.1Q	*HH:MM:SS.ms* [ether-hdr] *VLAN-info encap-ether-packet*
ARP	*HH:MM:SS.ms* [ether-hdr] *arp-type arp-info*
IP/ICMP	*HH:MM:SS.ms* [ether-hdr] *ip-source* > *ip-destination:* icmp: *icmp-type icmp-code* [checksum-failure]
IP/UDP	*HH:MM:SS.ms* [ether-hdr] *src-addr.src-port dest-addr.dst-port*: [checksum-info] udp *payload-len*
IP/TCP	*HH:MM:SS.ms* [ether-hdr] *src-addr.src-port* d*est-addr.dst-port*: *tcp-flags* [header-check] [checksum-info] *sequence-number ack-number tcp-window urgent-info tcp-options*
IP/Other	*HH:MM:SS.ms* [ether-hdr] *src-addr dest-addr*: *ip-protocol ip-length*
Other	*HH:MM:SS.ms ether-hdr*: *hex-dump*

Examples

This example shows how to display the capture configuration:

```
hostname(config)# show capture
capture arp ethernet-type arp interface outside
capture http access-list http packet-length 74 interface inside
```

This example shows how to display the packets that are captured by an ARP capture:

```
hostname(config)# show capture arp
2 packets captured
19:12:23.478429 arp who-has 171.69.38.89 tell 171.69.38.10
19:12:26.784294 arp who-has 171.69.38.89 tell 171.69.38.10
2 packets shown
```

Related Commands

Command	Description
capture	Enables packet capture capabilities for packet sniffing and network fault isolation.
clear capture	Clears the capture buffer.
copy capture	Copies a capture file to a server.

show chardrop

To display the count of characters dropped from the serial console, use the **show chardrop** command in privileged EXEC mode.

show chardrop

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.

Examples

The following is sample output from the **show chardrop** command:

```
hostname# show chardrop
Chars dropped pre-TxTimeouts: 0, post-TxTimeouts: 0
```

Related Commands

Command	Description
show running-config	Shows the current operating configuration.

show checkheaps

To show the checkheaps statistics, use the **show checkheaps** command in privileged EXEC mode. Checkheaps is a periodic process that verifies the sanity of the heap memory buffers (dynamic memory is allocated from the system heap memory region) and the integrity of the code region.

show checkheaps

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	—	•

Command History

Release	Modification
7.0(1)	This command was introduced.

Examples

The following is sample output from the **show checkheaps** command:

```
hostname# show checkheaps

Checkheaps stats from buffer validation runs
--------------------------------------------
Time elapsed since last run     : 42 secs
Duration of last run            : 0 millisecs
Number of buffers created       : 8082
Number of buffers allocated     : 7808
Number of buffers free          : 274
Total memory in use             : 43570344 bytes
Total memory in free buffers    : 87000 bytes
Total number of runs            : 310
```

Related Commands

Command	Description
checkheaps	Sets the checkheap verification intervals.

show checksum

To display the configuration checksum, use the **show checksum** command in privileged EXEC mode.

show checksum

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	

Command History

Release	Modification
7.0(1)	Support for this command was introduced on the security appliance.

Usage Guidelines

The **show checksum** command allows you to display four groups of hexadecimal numbers that act as a digital summary of the configuration contents. This checksum is calculated only when you store the configuration in Flash memory.

If a dot (“.”) appears before the checksum in the **show config** or **show checksum** command output, the output indicates a normal configuration load or write mode indicator (when loading from or writing to the security appliance Flash partition). The “.” shows that the security appliance is preoccupied with the operation but is not “hung up.” This message is similar to a “system processing, please wait” message.

Examples

This example shows how to display the configuration or the checksum:

```
hostname(config)# show checksum
Cryptochecksum: 1a2833c0 129ac70b 1a88df85 650dbb81
```

show chunkstat

To display the chunk statistics, use the **show chunkstat** command in privileged EXEC mode.

show chunkstat

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	—	•

Command History

Release	Modification
Preexisting	This command was preexisting.

Examples

This example shows how to display the chunk statistics:

```
hostname# show chunkstat
Global chunk statistics: created 181, destroyed 34, siblings created 94, siblings
destroyed 34

Per-chunk statistics: siblings created 0, siblings trimmed 0
Dump of chunk at 01edb4cc, name "Managed Chunk Queue Elements", data start @ 01edbd24, end
@ 01eddc54
next: 01eddc8c, next_sibling: 00000000, prev_sibling: 00000000
flags 00000001
maximum chunk elt's: 499, elt size: 16, index first free 498
# chunks in use: 1, HWM of total used: 1, alignment: 0
Per-chunk statistics: siblings created 0, siblings trimmed 0
Dump of chunk at 01eddc8c, name "Registry Function List", data start @ 01eddea4, end @
01ede348
next: 01ede37c, next_sibling: 00000000, prev_sibling: 00000000
flags 00000001
maximum chunk elt's: 99, elt size: 12, index first free 42
# chunks in use: 57, HWM of total used: 57, alignment: 0
```

Related Commands

Command	Description
show counters	Displays the protocol stack counters.
show cpu	Displays the CPU utilization information.

show class

To show the contexts assigned to a class, use the **show class** command in privileged EXEC mode.

show class *name*

Syntax Description

name	Specifies the name as a string up to 20 characters long. To show the default class, enter **default** for the name.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	—	—	•

Command History

Release	Modification
7.2(1)	This command was introduced.

Examples

The following is sample output from the **show class default** command:

```
hostname# show class default

Class Name           Members    ID   Flags
default                All       1    0001
```

Related Commands

Command	Description
class	Configures a resource class.
clear configure class	Clears the class configuration.
context	Configures a security context.
limit-resource	Sets the resource limit for a class.
member	Assigns a context to a resource class.

show clock

To view the time on the security appliance, use the **show clock** command in user EXEC mode.

show clock [**detail**]

Syntax Description

detail	(Optional) Indicates the clock source (NTP or user configuration) and the current summer-time setting (if any).

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
User EXEC	•	•	•	•	•

Command History

Release	Modification
Preexisting	This command was preexisting.

Examples

The following is sample output from the **show clock** command:

```
hostname> show clock
12:35:45.205 EDT Tue Jul 27 2004
```

The following is sample output from the **show clock detail** command:

```
hostname> show clock detail
12:35:45.205 EDT Tue Jul 27 2004
Time source is user configuration
Summer time starts 02:00:00 EST Sun Apr 4 2004
Summer time ends 02:00:00 EDT Sun Oct 31 2004
```

Related Commands

Command	Description
clock set	Manually sets the clock on the security appliance.
clock summer-time	Sets the date range to show daylight saving time.
clock timezone	Sets the time zone.
ntp server	Identifies an NTP server.
show ntp status	Shows the status of the NTP association.

show compression svc

To view compression statistics for SVC connections on the security appliance, use the **show compression svc** command from privileged EXEC mode:

show compression svc

Defaults

There is no default behavior for this command.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	—	•	—	—

Command History

Release	Modification
7.1(1)	This command was introduced.

Examples

The following example shows the output of the **show compression svc** command:

```
hostname# show compression svc
Compression SVC Sessions                    1
Compressed Frames                      249756
Compressed Data In (bytes)            0048042
Compressed Data Out (bytes)           4859704
Expanded Frames                             1
Compression Errors                          0
Compression Resets                          0
Compression Output Buf Too Small            0
Compression Ratio                        2.06
Decompressed Frames                    876687
Decompressed Data In                279300233
```

Related Commands

Command	Description
compression	Enables compression for all SVC and WebVPN connections.
svc compression	Enables compression of http data over an SVC connection for a specific group or user.

show configuration

To display the configuration that is saved in flash memory on the security appliance, use the **show configuration** command in privileged EXEC mode.

show configuration

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
Preexisting	This command was modified.

Usage Guidelines

The **show configuration** command displays the saved configuration in flash memory on the security appliance. Unlike the **show running-config** command, the **show configuration** command does not use many CPU resources to run.

To display the active configuration in memory (including saved configuration changes) on the security appliance, use the **show running-config** command.

Examples

This example shows how to display the configuration that is saved in flash memory on the security appliance:

```
hostname# show configuration
: enable password 8Ry2YjIyt7RRXU24 encrypted
names
dns-guard
!
interface Ethernet0/0
 nameif inside
 security-level 100
 ip address 192.168.2.5 255.255.255.0
!
interface Ethernet0/1
 nameif outside
 security-level 0
 ip address 10.132.12.6 255.255.255.0
!
interface Ethernet0/2
```

```
 nameif dmz
 security-level 50
 ip address 40.0.0.5 255.0.0.0
!
interface Ethernet0/3
 shutdown
 no nameif
 no security-level
 no ip address
!
interface Management0/0
 nameif management
 security-level 100
 ip address 192.168.1.1 255.255.255.0
 management-only
!
passwd 2KFQnbNIdI.2KYOU encrypted
boot system disk0:/newImage
ftp mode passive
access-list acl1 extended permit ip any any
access-list mgcpacl extended permit udp any any eq 2727
access-list mgcpacl extended permit udp any any eq 2427
access-list mgcpacl extended permit udp any any eq tftp
access-list mgcpacl extended permit udp any any eq 1719
access-list permitIp extended permit ip any any
pager lines 25
logging enable
logging console debugging
logging buffered debugging
logging asdm informational
mtu inside 1500
mtu outside 1500
mtu dmz 1500
mtu management 1500
icmp unreachable rate-limit 1 burst-size 1
icmp permit any inside
icmp permit any outside
icmp permit any dmz
asdm image disk0:/pdm
no asdm history enable
arp timeout 14400
global (outside) 1 10.132.12.50-10.132.12.52
global (outside) 1 interface
global (dmz) 1 interface
nat (inside) 1 0.0.0.0 0.0.0.0
access-group permitIp in interface inside
access-group permitIp in interface outside
access-group mgcpacl in interface dmz
!
router ospf 1
 network 40.0.0.0 255.0.0.0 area 192.168.2.0
 network 192.168.2.0 255.255.255.0 area 192.168.2.0
 log-adj-changes
 redistribute static subnets
 default-information originate
!
route outside 0.0.0.0 0.0.0.0 10.132.12.1 1
route outside 10.129.0.0 255.255.0.0 10.132.12.1 1
route outside 88.0.0.0 255.0.0.0 10.132.12.1 1
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00 mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00 sip-disconnect 0:02:00
timeout uauth 0:05:00 absolute
```

```
dynamic-access-policy-record DfltAccessPolicy
aaa authentication ssh console LOCAL
http server enable
http 10.132.12.0 255.255.255.0 outside
http 192.168.2.0 255.255.255.0 inside
http 192.168.1.0 255.255.255.0 management
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup linkdown coldstart
telnet 192.168.2.0 255.255.255.0 inside
telnet 10.132.12.0 255.255.255.0 outside
telnet timeout 5
ssh 192.168.2.0 255.255.255.0 inside
ssh timeout 5
console timeout 0
dhcpd address 192.168.1.2-192.168.1.254 management
dhcpd enable management
!
threat-detection basic-threat
threat-detection statistics access-list
!
class-map inspection_default
 match default-inspection-traffic
!
!
policy-map type inspect dns preset_dns_map
 parameters
  message-length maximum 512
policy-map global_policy
 class inspection_default
  inspect dns preset_dns_map
  inspect ftp
  inspect h323 h225
  inspect h323 ras
  inspect rsh
  inspect rtsp
  inspect esmtp
  inspect sqlnet
  inspect skinny
  inspect sunrpc
  inspect xdmcp
  inspect sip
  inspect netbios
  inspect tftp
  inspect mgcp
policy-map type inspect mgcp mgcpapp
 parameters
  call-agent 150.0.0.210 101
  gateway 50.0.0.201 101
  gateway 100.0.0.201 101
  command-queue 150
!
service-policy global_policy global
webvpn
 memory-size percent 25
 enable inside
 internal-password enable
 onscreen-keyboard logon
username snoopy password /JcYsjvxHfBHc4ZK encrypted
prompt hostname context
Cryptochecksum:62bf8f5de9466cdb64fe758079594635:
end
```

Related Commands

Command	Description
configure terminal	Configures the security appliance from the terminal.

show conn

To display the connection state for the designated connection type, use the **show conn** command in privileged EXEC mode. This command supports IPv4 and IPv6 addresses.

show conn [**count** | [**all**] [**detail**] [**long**] [**state** *state_type*] [**protocol** {**tcp** | **udp**}]
[**address** *src_ip*[**-***src_ip*] [**netmask** *mask*]] [**port** *src_port*[**-***src_port*]]
[**address** *dest_ip*[**-***dest_ip*] [**netmask** *mask*]] [**port** *dest_port*[**-***dest_port*]]]

Syntax Description

address	(Optional) Displays connections with the specified source or destination IP address.
all	(Optional) Displays connections that are to the device or from the device, in addition to through-traffic connections.
count	(Optional) Displays the number of active connections.
dest_ip	(Optional) Specifies the destination IP address (IPv4 or IPv6). To specify a range, separate the IP addresses with a dash (-), For example: `10.1.1.1-10.1.1.5`
dest_port	(Optional) Specifies the destination port number. To specify a range, separate the port numbers with a dash (-), For example: `1000-2000`
detail	(Optional) Displays connections in detail, including translation type and interface information.
long	(Optional) Displays connections in long format.
netmask *mask*	(Optional) Specifies a subnet mask for use with the given IP address.
port	(Optional) Displays connections with the specified source or destination port.
protocol {tcp | udp}	(Optional) Specifies the connection protocol, **tcp** or **udp**.
src_ip	(Optional) Specifies the source IP address (IPv4 or IPv6). To specify a range, separate the IP addresses with a dash (-), For example: `10.1.1.1-10.1.1.5`
src_port	(Optional) Specifies the source port number. To specify a range, separate the port numbers with a dash (-), For example: `1000-2000`
state *state_type*	(Optional) Specifies the connection state type. See Table 25-7 for a list of the keywords available for connection state types.

Defaults

All through connections are shown by default. You need to use the **all** keyword to also view management connections to the device.

Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
				Multiple	
	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	—

Command History

Release	Modification
7.0(8)/7.2(4)/8.0(4)/8.1(1)	The syntax was simplified to use source and destination concepts instead of “local” and “foreign.” In the new syntax, the source address is the first address entered and the destination is the second address. The old syntax used keywords like **foreign** and **fport** to determine the destination address and port.

Usage Guidelines

The **show conn** command displays the number of active TCP and UDP connections, and provides information about connections of various types. Use the **show conn all** command to see the entire table of connections.

Note When the security appliance creates a pinhole to allow secondary connections, this is shown as an incomplete conn by the **show conn** command. To clear this incomplete conn use the **clear conn** command.

The connection types that you can specify using the **show conn state** command are defined in Table 25-7. When specifying multiple connection types, use commas without spaces to separate the keywords.

Table 25-7 Connection State Types

Keyword	Connection Type Displayed
up	Connections in the up state.
conn_inbound	Inbound connections.
ctiqbe	CTIQBE connections
data_in	Inbound data connections.
data_out	Outbound data connections.
finin	FIN inbound connections.
finout	FIN outbound connections.
h225	H.225 connections
h323	H.323 connections
http_get	HTTP get connections.
mgcp	MGCP connections.
nojava	Connections that deny access to Java applets.
rpc	RPC connections.

Table 25-7 Connection State Types (continued)

Keyword	Connection Type Displayed
service_module	Connections being scanned by an SSM.
sip	SIP connections.
skinny	SCCP connections.
smtp_data	SMTP mail data connections.
sqlnet_fixup_data	SQL*Net data inspection engine connections.

When you use the **detail** option, the system displays information about the translation type and interface information using the connection flags defined in Table 25-8.

Table 25-8 Connection Flags

Flag	Description
a	awaiting outside ACK to SYN
A	awaiting inside ACK to SYN
B	initial SYN from outside
C	Computer Telephony Interface Quick Buffer Encoding (CTIQBE) media connection
d	dump
D	DNS
E	outside back connection
f	inside FIN
F	outside FIN
g	Media Gateway Control Protocol (MGCP) connection
G	connection is part of a group[1]
h	H.225
H	H.323
i	incomplete TCP or UDP connection
I	inbound data
k	Skinny Client Control Protocol (SCCP) media connection
K	GTP t3-response
m	SIP media connection
M	SMTP data
O	outbound data
p	replicated (unused)
P	inside back connection
q	SQL*Net data
r	inside acknowledged FIN
R	outside acknowledged FIN for TCP connection
R	UDP RPC[2]

Table 25-8 Connection Flags (continued)

Flag	Description
s	awaiting outside SYN
S	awaiting inside SYN
t	SIP transient connection[3]
T	SIP connection[4]
U	up
X	Inspected by the service module, such as a CSC SSM.

1. The G flag indicates the connection is part of a group. It is set by the GRE and FTP Strict fixups to designate the control connection and all its associated secondary connections. If the control connection terminates, then all associated secondary connections are also terminated.
2. Because each row of **show conn** command output represents one connection (TCP or UDP), there will be only one R flag per row.
3. For UDP connections, the value t indicates that it will timeout after one minute.
4. For UDP connections, the value T indicates that the connection will timeout according to the value specified using the **timeout sip** command.

Note For connections using a DNS server, the source port of the connection may be replaced by the *IP address of DNS server* in the **show conn** command output.

A single connection is created for multiple DNS sessions, as long as they are between the same two hosts, and the sessions have the same 5-tuple (source/destination IP address, source/destination port, and protocol). DNS identification is tracked by *app_id*, and the idle timer for each app_id runs independently.

Because the app_id expires independently, a legitimate DNS response can only pass through the security appliance within a limited period of time and there is no resource build-up. However, when you enter the **show conn** command, you will see the idle timer of a DNS connection being reset by a new DNS session. This is due to the nature of the shared DNS connection and is by design.

Note When there is no TCP traffic for the period of inactivity defined by the **timeout tcp** command (by default, 1:00:00), the connection is closed and the corresponding conn flag entries are no longer displayed.

Examples

When specifying multiple connection types, use commas without spaces to separate the keywords. The following example displays information about RPC, H.323, and SIP connections in the Up state:

```
hostname# show conn state up,rpc,h323,sip
```

The following is sample output from the **show conn count** command:

```
hostname# show conn count
29 in use, 63 most used
```

The following is sample output from the **show conn** command. This example shows a TCP session connection from inside host 10.1.1.15 to the outside Telnet server at 10.10.49.10. Because there is no B flag, the connection is initiated from the inside. The “U”, “I”, and “O” flags denote that the connection is active and has received inbound and outbound data.

```
hostname# show conn
29 in use, 63 most used
TCP out 10.10.49.10:23 in 10.1.1.15:1026 idle 0:00:22 bytes 1774 flags UIO
UDP out 10.10.49.10:31649 in 10.1.1.15:1028 idle 0:00:14 bytes 0 flags D-
UDP out 10.132.64.109:31807 in 10.130.64.182:0 idle 0:01:05 bytes 0 flags Ci
UDP out 10.132.64.109:31806 in 10.130.64.182:4472 idle 0:00:00 bytes 567084 flags C
TCP out 10.132.64.25:2748 in 10.130.64.182:4471 idle 0:00:00 bytes 5750 flags UIO
UDP out 10.132.64.179:1719 in 10.130.64.182:4470 idle 0:01:28 bytes 133 flags H-
UDP out 10.68.226.120:53 in 10.130.64.21:47349 idle 0:00:04 bytes 45 flags -
UDP out 10.68.226.120:53 in 10.130.64.21:47346 idle 0:00:19 bytes 90 flags -
UDP out 10.68.226.120:53 in 10.130.64.21:47344 idle 0:00:39 bytes 90 flags -
UDP out 10.68.226.120:53 in 10.130.64.21:47342 idle 0:00:52 bytes 43 flags -
UDP out 10.68.226.120:53 in 10.130.64.21:47340 idle 0:00:59 bytes 90 flags -
UDP out 10.68.226.120:53 in 10.130.64.21:47338 idle 0:01:19 bytes 90 flags -
UDP out 10.68.226.120:53 in 10.130.64.21:47336 idle 0:01:39 bytes 90 flags -
UDP out 10.68.226.120:53 in 10.130.64.21:47334 idle 0:01:59 bytes 90 flags -
UDP out 10.132.64.109:0 in 10.130.64.182:28301 idle 0:01:05 bytes 0 flags Ci
UDP out 10.132.64.109:0 in 10.130.64.182:28300 idle 0:01:05 bytes 0 flags Ci
UDP out 10.132.64.25:0 in 10.130.64.182:28301 idle 0:01:05 bytes 0 flags Ci
UDP out 10.132.64.25:0 in 10.130.64.182:28300 idle 0:01:05 bytes 0 flags Ci
```

The following is sample output from the **show conn** command, which includes the “X” flag to indicate that the connection is being scanned by the SSM:

```
hostname# show conn address 10.0.0.122 state service_module
TCP out 10.1.0.121:22 in 10.0.0.122:34446 idle 0:00:03 bytes 2733 flags UIOX
```

The following is sample output from the **show conn detail** command. This example shows a UDP connection from outside host 10.10.49.10 to inside host 10.1.1.15. The D flag denotes that this is a DNS connection. The number 1028 is the DNS ID over the connection.

```
hostname(config)# show conn detail
27 in use, 63 most used
Flags: A - awaiting inside ACK to SYN, a - awaiting outside ACK to SYN,
       B - initial SYN from outside, C - CTIQBE media, D - DNS, d - dump,
       E - outside back connection, F - outside FIN, f - inside FIN,
       G - group, g - MGCP, H - H.323, h - H.225.0, I - inbound data,
       i - incomplete, J - GTP, j - GTP data, K - GTP t3-response
       k - Skinny media, M - SMTP data, m - SIP media, n - GUP
       O - outbound data, P - inside back connection, q - SQL*Net data,
       R - outside acknowledged FIN,
       R - UDP SUNRPC, r - inside acknowledged FIN, S - awaiting inside SYN,
       s - awaiting outside SYN, T - SIP, t - SIP transient, U - up, W - WAAS,
       X - inspected by service module
TCP outside:10.10.49.10/23 inside:10.1.1.15/1026 flags UIO
UDP outside:10.10.49.10/31649 inside:10.1.1.15/1028 flags dD
UDP outside:10.132.64.109/31807 inside:10.130.64.182/0 flags Ci
UDP outside:10.132.64.109/31806 inside:10.130.64.182/4472 flags C
TCP outside:10.132.64.25/2748 inside:10.130.64.182/4471 flags UIO
UDP outside:10.132.64.179/1719 inside:10.130.64.182/4470 flags H-
UDP outside:10.68.226.120/53 inside:10.130.64.21/47349 flags -
UDP outside:10.68.226.120/53 inside:10.130.64.21/47346 flags -
UDP outside:10.68.226.120/53 inside:10.130.64.21/47344 flags -
UDP outside:10.68.226.120/53 inside:10.130.64.21/47342 flags -
UDP outside:10.68.226.120/53 inside:10.130.64.21/47340 flags -
UDP outside:10.68.226.120/53 inside:10.130.64.21/47338 flags -
UDP outside:10.68.226.120/53 inside:10.130.64.21/47336 flags -
UDP outside:10.132.64.109/0 inside:10.130.64.182/28301 flags Ci
```

```
UDP outside:10.132.64.109/0 inside:10.130.64.182/28300 flags Ci
UDP outside:10.132.64.25/0 inside:10.130.64.182/28301 flags Ci
UDP outside:10.132.64.25/0 inside:10.130.64.182/28300 flags Ci
```

Related Commands

Commands	Description
clear conn	Clears a specific connection or connections.
inspect ctiqbe	Enables CTIQBE application inspection.
inspect h323	Enables H.323 application inspection.
inspect mgcp	Enables MGCP application inspection.
inspect sip	Removes Java applets from HTTP traffic.
inspect skinny	Enables SCCP application inspection.

show console-output

To display the currently captured console output, use the **show console-output** command in privileged EXEC mode.

show console-output

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
Preexisting	This command was preexisting.

Examples

The following example shows the message that displays when there is no console output:

```
hostname# show console-output
Sorry, there are no messages to display
```

Related Commands

Command	Description
clear configure console	Restores the default console connection settings.
clear configure timeout	Restores the default idle time duration in the configuration.
console timeout	Sets the idle timeout for a console connection to the security appliance.
show running-config console timeout	Displays the idle timeout for a console connection to the security appliance.

show context

To show context information including allocated interfaces and the configuration file URL, the number of contexts configured, or from the system execution space, a list of all contexts, use the **show context** command in privileged EXEC mode.

show context [*name* | **detail** | **count**]

Syntax Description

count	(Optional) Shows the number of contexts configured.
detail	(Optional) Shows additional detail about the context(s) including the running state and information for internal use.
name	(Optional) Sets the context name. If you do not specify a name, the security appliance displays all contexts. Within a context, you can only enter the current context name.

Defaults

In the system execution space, the security appliance displays all contexts if you do not specify a name.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
Privileged EXEC	•	•	—	•	•

Command History

Release	Modification
7.0(1)	This command was introduced.
8.0(2)	Information about assigned IPS virtual sensors was added.

Usage Guidelines

See the "Examples" section for a description of the display output.

Examples

The following is sample output from the **show context** command. The following sample display shows three contexts:

```
hostname# show context

Context Name      Interfaces                  URL
*admin            GigabitEthernet0/1.100      flash:/admin.cfg
                  GigabitEthernet0/1.101
contexta          GigabitEthernet0/1.200      flash:/contexta.cfg
                  GigabitEthernet0/1.201
contextb          GigabitEthernet0/1.300      flash:/contextb.cfg
                  GigabitEthernet0/1.301
Total active Security Contexts: 3
```

Table 25-9 shows each field description.

Table 25-9 show context Fields

Field	Description
Context Name	Lists all context names. The context name with the asterisk (*) is the admin context.
Interfaces	The interfaces assigned to the context.
URL	The URL from which the security appliance loads the context configuration.

The following is sample output from the **show context detail** command in the system execution space:

```
hostname# show context detail

Context "admin", has been created, but initial ACL rules not complete
  Config URL: flash:/admin.cfg
  Real Interfaces: Management0/0
  Mapped Interfaces: Management0/0
  Real IPS Sensors: ips1, ips2
  Mapped IPS Sensors: highsec, lowsec
  Flags: 0x00000013, ID: 1

Context "ctx", has been created, but initial ACL rules not complete
  Config URL: ctx.cfg
  Real Interfaces: GigabitEthernet0/0.10, GigabitEthernet0/1.20,
     GigabitEthernet0/2.30
  Mapped Interfaces: int1, int2, int3
  Real IPS Sensors: ips1, ips3
  Mapped IPS Sensors: highsec, lowsec
  Flags: 0x00000011, ID: 2

Context "system", is a system resource
  Config URL: startup-config
  Real Interfaces:
  Mapped Interfaces: Control0/0, GigabitEthernet0/0,
     GigabitEthernet0/0.10, GigabitEthernet0/1, GigabitEthernet0/1.10,
     GigabitEthernet0/1.20, GigabitEthernet0/2, GigabitEthernet0/2.30,
     GigabitEthernet0/3, Management0/0, Management0/0.1
  Flags: 0x00000019, ID: 257

Context "null", is a system resource
  Config URL: ... null ...
  Real Interfaces:
  Mapped Interfaces:
  Flags: 0x00000009, ID: 258
```

Table 25-10 shows each field description.

Table 25-10 Context States

Field	Description
Context	The context name. The null context information is for internal use only. The system context represents the system execution space.
State Message:	The context state. See the possible messages below.
Has been created, but initial ACL rules not complete	The security appliance parsed the configuration but has not yet downloaded the default ACLs to establish the default security policy. The default security policy applies to all contexts initially, and includes disallowing traffic from lower security levels to higher security levels, enabling application inspection, and other parameters. This security policy ensures that no traffic can pass through the security appliance after the configuration is parsed but before the configuration ACLs are compiled. You are unlikely to see this state because the configuration ACLs are compiled very quickly.
Has been created, but not initialized	You entered the **context** *name* command, but have not yet entered the **config-url** command.
Has been created, but the config hasn't been parsed	The default ACLs were downloaded, but the security appliance has not parsed the configuration. This state might exist because the configuration download might have failed because of network connectivity issues, or you have not yet entered the **config-url** command. To reload the configuration, from within the context, enter **copy startup-config running-config**. From the system, reenter the **config-url** command. Alternatively, you can start configuring the blank running configuration.
Is a system resource	This state applies only to the system execution space and to the null context. The null context is used by the system, and the information is for internal use only.
Is a zombie	You deleted the context using the **no context** or **clear context** command, but the context information persists in memory until the security appliance reuses the context ID for a new context, or you restart.
Is active	This context is currently running and can pass traffic according to the context configuration security policy.
Is ADMIN and active	This context is the admin context and is currently running.
Was a former ADMIN, but is now a zombie	You deleted the admin context using the **clear configure context** command, but the context information persists in memory until the security appliance reuses the context ID for a new context, or you restart.
Real Interfaces	The interfaces assigned to the context. If you mapped the interface IDs in the **allocate-interface** command, this display shows the real name of the interface.
Mapped Interfaces	If you mapped the interface IDs in the **allocate-interface** command, this display shows the mapped names. If you did not map the interfaces, the display lists the real names again.

Table 25-10 Context States (continued)

Field	Description
Real IPS Sensors	The IPS virtual sensors assigned to the context if you have an AIP SSM installed. If you mapped the sensor names in the **allocate-ips** command, this display shows the real name of the sensor.
Mapped IPS Sensors	If you mapped the sensor names in the **allocate-ips** command, this display shows the mapped names. If you did not map the sensor names, the display lists the real names again.
Flag	For internal use only.
ID	An internal ID for this context.

The following is sample output from the **show context count** command:

```
hostname# show context count
Total active contexts: 2
```

Related Commands

Command	Description
admin-context	Sets the admin context.
allocate-interface	Assigns interfaces to a context.
changeto	Changes between contexts or the system execution space.
config-url	Specifies the location of the context configuration.
context	Creates a security context in the system configuration and enters context configuration mode.

show controller

To view controller-specific information of all interfaces present, use the **show controller** command in privileged EXEC mode.

show controller [**slot**] [[*physical_interface*] [**detail**]]

Syntax Description

detail	(Optional) Shows additional detail about the controller.
physical_interface	(Optional) Identifies the interface ID.
slot	(Optional) Displays PCI-e bus and slot information for the ASA 5580 adaptive security appliance only.

Defaults

If you do not identify an interface, this command shows information for all interfaces.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.2(1)	This command was introduced.
8.0(2)	This command now applies to all platforms, and not just the ASA 5505. The **detail** keyword was added.
8.1(1)	The **slot** keyword was added for the ASA 5580 adaptive security appliance.

Usage Guidelines

This command helps Cisco TAC gather useful debug information about the controller when investigating internal and customer found defects. The actual output depends on the model and Ethernet controller.

Examples

The following is sample output from the **show controller** command:

```
hostname# show controller

Ethernet0/0:
   Marvell 88E6095 revision 2, switch port 7
     PHY Register:
         Control:       0x3000  Status:        0x786d
         Identifier1:   0x0141  Identifier2:   0x0c85
         Auto Neg:      0x01e1  LP Ability:    0x40a1
         Auto Neg Ex:   0x0005  PHY Spec Ctrl: 0x0130
         PHY Status:    0x4c00  PHY Intr En:   0x0400
         Int Port Sum:  0x0000  Rcv Err Cnt:   0x0000
```

```
        Led select:    0x1a34
        Reg 29:        0x0003  Reg 30:        0x0000
    Port Registers:
        Status:        0x0907  PCS Ctrl:      0x0003
        Identifier:    0x0952  Port Ctrl:     0x0074
        Port Ctrl-1:   0x0000  Vlan Map:      0x077f
        VID and PRI:   0x0001  Port Ctrl-2:   0x0cc8
        Rate Ctrl:     0x0000  Rate Ctrl-2:   0x3000
        Port Asc Vt:   0x0080
        In Discard Lo: 0x0000  In Discard Hi: 0x0000
        In Filtered:   0x0000  Out Filtered:  0x0000

    Global Registers:
        Control:       0x0482

------------------------------------------------------------------------
Number of VLANs: 1
------------------------------------------------------------------------
Vlan[db]\Port|  0 |  1 |  2 |  3 |  4 |  5 |  6 |  7 |  8 |  9 | 10 |
------------------------------------------------------------------------
  <0001[01]> | EUT| EUT| EUT| EUT| EUT| EUT| EUT| EUT| EUM| NM | NM |
------------------------------------------------------------------------

....

Ethernet0/6:
   Marvell 88E6095 revision 2, switch port 1
     PHY Register:
        Control:       0x3000  Status:        0x7849
        Identifier1:   0x0141  Identifier2:   0x0c85
        Auto Neg:      0x01e1  LP Ability:    0x0000
        Auto Neg Ex:   0x0004  PHY Spec Ctrl: 0x8130
        PHY Status:    0x0040  PHY Intr En:   0x8400
        Int Port Sum:  0x0000  Rcv Err Cnt:   0x0000
        Led select:    0x1a34
        Reg 29:        0x0003  Reg 30:        0x0000
     Port Registers:
        Status:        0x0007  PCS Ctrl:      0x0003
        Identifier:    0x0952  Port Ctrl:     0x0077
        Port Ctrl-1:   0x0000  Vlan Map:      0x07fd
        VID and PRI:   0x0001  Port Ctrl-2:   0x0cc8
        Rate Ctrl:     0x0000  Rate Ctrl-2:   0x3000
        Port Asc Vt:   0x0002
        In Discard Lo: 0x0000  In Discard Hi: 0x0000
        In Filtered:   0x0000  Out Filtered:  0x0000
   ----Inline power related counters and registers----
   Power on fault: 0  Power off fault: 0
   Detect enable fault: 0  Detect disable fault: 0
   Faults: 0
   Driver counters:
   I2C Read Fail: 0   I2C Write Fail: 0
   Resets: 1  Initialized: 1
   PHY reset error: 0
   LTC4259 registers:
   INTRPT STATUS = 0x88  INTRPT MASK   = 0x00  POWER EVENT   = 0x00
   DETECT EVENT  = 0x03  FAULT EVENT   = 0x00  TSTART EVENT  = 0x00
   SUPPLY EVENT  = 0x02  PORT1 STATUS  = 0x06  PORT2 STATUS  = 0x06
   PORT3 STATUS  = 0x00  PORT4 STATUS  = 0x00  POWER STATUS  = 0x00
   OPERATE MODE  = 0x0f  DISC. ENABLE  = 0x30  DT/CLASS ENBL = 0x33
   TIMING CONFIG = 0x00  MISC. CONFIG  = 0x00

...

Internal-Data0/0:
```

```
   Y88ACS06 Register settings:
    rap                          0xe0004000 = 0x00000000
    ctrl_status                  0xe0004004 = 0x5501064a
    irq_src                      0xe0004008 = 0x00000000
    irq_msk                      0xe000400c = 0x00000000
    irq_hw_err_src               0xe0004010 = 0x00000000
    irq_hw_err_msk               0xe0004014 = 0x00001000
    bmu_cs_rxq                   0xe0004060 = 0x002aaa80
    bmu_cs_stxq                  0xe0004068 = 0x01155540
    bmu_cs_atxq                  0xe000406c = 0x012aaa80

   Bank 2: MAC address registers:

....
```

The following is sample output from the **show controller detail** command:

```
hostname# show controller gigabitethernet0/0 detail

GigabitEthernet0/0:
   Intel i82546GB revision 03

     Main Registers:
         Device Control:             0xf8260000 = 0x003c0249
         Device Status:              0xf8260008 = 0x00003347
         Extended Control:           0xf8260018 = 0x000000c0
         RX Config:                  0xf8260180 = 0x0c000000
         TX Config:                  0xf8260178 = 0x000001a0
         RX Control:                 0xf8260100 = 0x04408002
         TX Control:                 0xf8260400 = 0x000400fa
         TX Inter Packet Gap:        0xf8260410 = 0x00602008
         RX Filter Cntlr:            0xf8260150 = 0x00000000
         RX Chksum:                  0xf8265000 = 0x00000300

     RX Descriptor Registers:
         RX Descriptor 0 Cntlr:      0xf8262828 = 0x00010000
         RX Descriptor 0 AddrLo:     0xf8262800 = 0x01985000
         RX Desccriptor 0 AddrHi:    0xf8262804 = 0x00000000
         RX Descriptor 0 Length:     0xf8262808 = 0x00001000
         RX Descriptor 0 Head:       0xf8262810 = 0x00000000
         RX Descriptor 0 Tail:       0xf8262818 = 0x000000ff
         RX Descriptor 1 Cntlr:      0xf8262828 = 0x00010000
         RX Descriptor 1 AddrLo:     0xf8260138 = 0x00000000
         RX Descriptor 1 AddrHi:     0xf826013c = 0x00000000
         RX Descriptor 1 Length:     0xf8260140 = 0x00000000
         RX Descriptor 1 Head:       0xf8260148 = 0x00000000
         RX Descriptor 1 Tail:       0xf8260150 = 0x00000000

     TX Descriptor Registers:
         TX Descriptor 0 Cntlr:      0xf8263828 = 0x00000000
         TX Descriptor 0 AddrLo:     0xf8263800 = 0x01987000
         TX Descriptor 0 AddrHi:     0xf8263804 = 0x00000000
         TX Descriptor 0 Length:     0xf8263808 = 0x00001000
         TX Descriptor 0 Head:       0xf8263810 = 0x00000000
         TX Descriptor 0 Tail:       0xf8263818 = 0x00000000

     RX Address Array:
         Ethernet Address 0:         0012.d948.ef58
         Ethernet Address 1:         Not Valid!
         Ethernet Address 2:         Not Valid!
         Ethernet Address 3:         Not Valid!
         Ethernet Address 4:         Not Valid!
         Ethernet Address 5:         Not Valid!
         Ethernet Address 6:         Not Valid!
```

```
        Ethernet Address 7:         Not Valid!
        Ethernet Address 8:         Not Valid!
        Ethernet Address 9:         Not Valid!
        Ethernet Address a:         Not Valid!
        Ethernet Address b:         Not Valid!
        Ethernet Address c:         Not Valid!
        Ethernet Address d:         Not Valid!
        Ethernet Address e:         Not Valid!
        Ethernet Address f:         Not Valid!

    PHY Registers:
        Phy Control:                0x1140
        Phy Status:                 0x7969
        Phy ID 1:                   0x0141
        Phy ID 2:                   0x0c25
        Phy Autoneg Advertise:      0x01e1
        Phy Link Partner Ability:   0x41e1
        Phy Autoneg Expansion:      0x0007
        Phy Next Page TX:           0x2801
        Phy Link Partnr Next Page:  0x0000
        Phy 1000T Control:          0x0200
        Phy 1000T Status:           0x4000
        Phy Extended Status:        0x3000

    Detailed Output - RX Descriptor Ring:

    rx_bd[000]: baddr      = 0x019823A2, length = 0x0000, status  = 0x00
                pkt chksum = 0x0000,     errors = 0x00,   special = 0x0000
    rx_bd[001]: baddr      = 0x01981A62, length = 0x0000, status  = 0x00
                pkt chksum = 0x0000,     errors = 0x00,   special = 0x0000

   ........
```

The following is sample output from the **show controller slot** command:

```
Slot  Card Description                              PCI-e Bandwidth Cap.
----  ----------------                             ----------------------
3.    ASA 5580 2 port 10GE SR Fiber Interface Card   Bus: x4, Card: x8

4.    ASA 5580 4 port GE Copper Interface Card       Bus: x4, Card: x4

5.    ASA 5580 2 port 10GE SR Fiber Interface Card   Bus: x8, Card: x8

6.    ASA 5580 4 port GE Fiber Interface Card        Bus: x4, Card: x4

7.    empty                                          Bus: x8

8.    empty                                          Bus: x8
```

Related Commands

Command	Description
show interface	Shows the interface statistics.
show tech-support	Shows information so Cisco TAC can diagnose problems.

show counters

To display the protocol stack counters, use the **show counters** command in privileged EXEC mode.

show counters [all | context *context-name* **| summary | top** *N*] [**detail**] [**protocol** *protocol_name* [**:***counter_name*]] [**threshold** *N*]

Syntax Description

all	Displays the filter details.
context *context-name*	Specifies the context name.
:*counter_name*	Specifies a counter by name.
detail	Displays additional counters information.
protocol *protocol_name*	Displays the counters for the specified protocol.
summary	Displays a counter summary.
threshold *N*	Displays only those counters at or above the specified threshold. The range is 1 through 4294967295.
top *N*	Displays the counters at or above the specified threshold. The range is 1 through 4294967295.

Defaults

show counters summary detail threshold 1

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
7.0	This command was introduced.

Examples

The following example shows how to display all counters:

```
hostname# show counters all
Protocol     Counter           Value   Context
IOS_IPC      IN_PKTS               2   single_vf
IOS_IPC      OUT_PKTS              2   single_vf

hostname# show counters
Protocol     Counter           Value   Context
NPCP         IN_PKTS            7195   Summary
NPCP         OUT_PKTS           7603   Summary
IOS_IPC      IN_PKTS             869   Summary
IOS_IPC      OUT_PKTS            865   Summary
IP           IN_PKTS             380   Summary
IP           OUT_PKTS            411   Summary
IP           TO_ARP              105   Summary
IP           TO_UDP                9   Summary
UDP          IN_PKTS               9   Summary
UDP          DROP_NO_APP           9   Summary
FIXUP        IN_PKTS             202   Summary
```

The following example shows how to display a summary of counters:

```
hostname# show counters summary
Protocol     Counter           Value   Context
IOS_IPC      IN_PKTS               2   Summary
IOS_IPC      OUT_PKTS              2   Summary
```

The following example shows how to display counters for a context:

```
hostname# show counters context single_vf
Protocol     Counter           Value   Context
IOS_IPC      IN_PKTS               4   single_vf
IOS_IPC      OUT_PKTS              4   single_vf
```

Related Commands

Command	Description
clear counters	Clears the protocol stack counters.

show cpu

To display the CPU utilization information, use the **show cpu** command in privileged EXEC mode.

show cpu [**core** *core_id* | **profile** | **usage**]

From the system configuration in multiple context mode:

show cpu [**context** {**all** | *context_name*} | **core** *core_id* | **profile** | **usage**]]

From the multiple context mode using any configuration except system:

show cpu [**usage**]

Syntax Description

all	Specifies the CPU usage for all cores.
context	Specifies that the display show a context.
core	Specifies the CPU usage for the specified core ID.
core_id	Specifies the name of the context to display; range is 1 thorugh 8.
context_name	Specifies the name of the context to display.
usage	(Optional) Displays the CPU usage.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
Preexisting	This command was preexisting.

Usage Guidelines

The cpu usage is computed using an approximation of the load every five seconds, and by further feeding this approximation into two, following moving averages.

You can use the **show cpu** command to find process related loads (that is, activity on behalf of items listed by the output of the **show process** command in both single mode and from the system configuration in multiple context mode).

Further, you can request, when in multiple context mode, a breakdown of the process related load to CPU consumed by any configured contexts by changing to each context and entering the **show cpu** command or by entering the **show cpu context** variant of this command.

Note In multiple context mode, the **show cpu core** command can only be displayed in system configuration mode.

While process related load is rounded to the nearest whole number, context related loads include one additional decimal digit of precision. For example, entering **show cpu** from the system context produces a different number than from entering the **show cpu context system** command. The former is an approximate summary of everything in **show cpu context all**, and the latter is only a portion of that summary.

Examples

The following example shows how to display the CPU utilization in single mode:

```
hostname# show cpu usage
CPU utilization for 5 seconds = 18%; 1 minute: 18%; 5 minutes: 18%
```

This example shows how to display the CPU utilization for the system context in multiple mode:

```
hostname# show cpu context system
CPU utilization for 5 seconds = 9.1%; 1 minute: 9.2%; 5 minutes: 9.1%
```

The following shows how to display the CPU utilization for all contexts:

```
hostname# show cpu usage context all
5 sec  1 min  5 min  Context Name
9.1%   9.2%   9.1%  system
0.0%   0.0%   0.0%  admin
5.0%   5.0%   5.0%  one
4.2%   4.3%   4.2%  two
```

The following shows how to display the CPU utilization for all cores:

```
hostname# show cpu core all
CPU     5 sec   1 min   5 min
CPU 1   10%     5%      1%
CPU 2  10%      5%      1%
CPU 3  11%      6%      1%
CPU 4   12%     6%      1%
CPU 5   10%     5%      1%
CPU 6   9%      5%      0%
CPU 7   10%     5%      1%
CPU 8   11%     5%      1%
```

This example shows how to display the CPU utilization for a context named “one”:

```
hostname/one# show cpu usage
CPU utilization for 5 seconds = 5.0%; 1 minute: 5.0%; 5 minutes: 5.0%
```

Related Commands

Command	Description
show counters	Displays the protocol stack counters.

show crashinfo

To display the contents of the crash file stored in Flash memory, enter the **show crashinfo** command in privileged EXEC mode.

show crashinfo [**save**]

Syntax Description

save	(Optional) Displays if the security appliance is configured to save crash information to Flash memory or not.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
Privileged EXEC	•	•	•	—	•

Command History

Release	Modification
Preexisting	This command was preexisting.

Usage Guidelines

If the crash file is from a test crash (generated from the **crashinfo test** command), the first string of the crash file is "`: Saved_Test_Crash`" and the last string is "`: End_Test_Crash`". If the crash file is from a real crash, the first string of the crash file is "`: Saved_Crash`" and the last string is "`: End_Crash`". (This includes crashes from use of the **crashinfo force page-fault** or **crashinfo force watchdog** commands).

If there is no crash data saved in flash, or if the crash data has been cleared by entering the **clear crashinfo** command, the **show crashinfo** command displays an error message.

Examples

The following example shows how to display the current crash information configuration:

```
hostname# show crashinfo save
crashinfo save enable
```

The following example shows the output for a crash file test. (However, this test does not actually crash the security appliance. It provides a simulated example file.)

```
hostname(config)# crashinfo test
hostname(config)# exit
hostname# show crashinfo
: Saved_Test_Crash

Thread Name: ci/console (Old pc 0x001a6ff5 ebp 0x00e88920)

Traceback:
0: 00323143
1: 0032321b
2: 0010885c
3: 0010763c
4: 001078db
5: 00103585
6: 00000000
    vector 0x000000ff (user defined)
       edi 0x004f20c4
       esi 0x00000000
       ebp 0x00e88c20
       esp 0x00e88bd8
       ebx 0x00000001
       edx 0x00000074
       ecx 0x00322f8b
       eax 0x00322f8b
error code n/a
       eip 0x0010318c
        cs 0x00000008
    eflags 0x00000000
       CR2 0x00000000
Stack dump: base:0x00e8511c size:16384, active:1476
0x00e89118: 0x004f1bb4
0x00e89114: 0x001078b4
0x00e89110-0x00e8910c: 0x00000000
0x00e89108-0x00e890ec: 0x12345678
0x00e890e8: 0x004f1bb4
0x00e890e4: 0x00103585
0x00e890e0: 0x00e8910c
0x00e890dc-0x00e890cc: 0x12345678
0x00e890c8: 0x00000000
0x00e890c4-0x00e890bc: 0x12345678
0x00e890b8: 0x004f1bb4
0x00e890b4: 0x001078db
0x00e890b0: 0x00e890e0
0x00e890ac-0x00e890a8: 0x12345678
0x00e890a4: 0x001179b3
0x00e890a0: 0x00e890b0
0x00e8909c-0x00e89064: 0x12345678
0x00e89060: 0x12345600
0x00e8905c: 0x20232970
0x00e89058: 0x616d2d65
0x00e89054: 0x74002023
0x00e89050: 0x29676966
0x00e8904c: 0x6e6f6328
0x00e89048: 0x31636573
0x00e89044: 0x7069636f
0x00e89040: 0x64786970
```

```
0x00e8903c-0x00e88e50: 0x00000000
0x00e88e4c: 0x000a7473
0x00e88e48: 0x6574206f
0x00e88e44: 0x666e6968
0x00e88e40: 0x73617263
0x00e88e3c-0x00e88e38: 0x00000000
0x00e88e34: 0x12345600
0x00e88e30-0x00e88dfc: 0x00000000
0x00e88df8: 0x00316761
0x00e88df4: 0x74706100
0x00e88df0: 0x12345600
0x00e88dec-0x00e88ddc: 0x00000000
0x00e88dd8: 0x00000070
0x00e88dd4: 0x616d2d65
0x00e88dd0: 0x74756f00
0x00e88dcc: 0x00000000
0x00e88dc8: 0x00e88e40
0x00e88dc4: 0x004f20c4
0x00e88dc0: 0x12345600
0x00e88dbc: 0x00000000
0x00e88db8: 0x00000035
0x00e88db4: 0x315f656c
0x00e88db0: 0x62616e65
0x00e88dac: 0x0030fcf0
0x00e88da8: 0x3011111f
0x00e88da4: 0x004df43c
0x00e88da0: 0x0053fef0
0x00e88d9c: 0x004f1bb4
0x00e88d98: 0x12345600
0x00e88d94: 0x00000000
0x00e88d90: 0x00000035
0x00e88d8c: 0x315f656c
0x00e88d88: 0x62616e65
0x00e88d84: 0x00000000
0x00e88d80: 0x004f20c4
0x00e88d7c: 0x00000001
0x00e88d78: 0x01345678
0x00e88d74: 0x00f53854
0x00e88d70: 0x00f7f754
0x00e88d6c: 0x00e88db0
0x00e88d68: 0x00e88d7b
0x00e88d64: 0x00f53874
0x00e88d60: 0x00e89040
0x00e88d5c-0x00e88d54: 0x12345678
0x00e88d50-0x00e88d4c: 0x00000000
0x00e88d48: 0x004f1bb4
0x00e88d44: 0x00e88d7c
0x00e88d40: 0x00e88e40
0x00e88d3c: 0x00f53874
0x00e88d38: 0x004f1bb4
0x00e88d34: 0x0010763c
0x00e88d30: 0x00e890b0
0x00e88d2c: 0x00e88db0
0x00e88d28: 0x00e88d88
0x00e88d24: 0x0010761a
0x00e88d20: 0x00e890b0
0x00e88d1c: 0x00e88e40
0x00e88d18: 0x00f53874
0x00e88d14: 0x0010166d
0x00e88d10: 0x0000000e
0x00e88d0c: 0x00f53874
0x00e88d08: 0x00f53854
0x00e88d04: 0x0048b301
0x00e88d00: 0x00e88d30
```

```
0x00e88cfc: 0x0000000e
0x00e88cf8: 0x00f53854
0x00e88cf4: 0x0048a401
0x00e88cf0: 0x00f53854
0x00e88cec: 0x00f53874
0x00e88ce8: 0x0000000e
0x00e88ce4: 0x0048a64b
0x00e88ce0: 0x0000000e
0x00e88cdc: 0x00f53874
0x00e88cd8: 0x00f7f96c
0x00e88cd4: 0x0048b4f8
0x00e88cd0: 0x00e88d00
0x00e88ccc: 0x0000000f
0x00e88cc8: 0x00f7f96c
0x00e88cc4-0x00e88cc0: 0x0000000e
0x00e88cbc: 0x00e89040
0x00e88cb8: 0x00000000
0x00e88cb4: 0x00f5387e
0x00e88cb0: 0x00f53874
0x00e88cac: 0x00000002
0x00e88ca8: 0x00000001
0x00e88ca4: 0x00000009
0x00e88ca0-0x00e88c9c: 0x00000001
0x00e88c98: 0x00e88cb0
0x00e88c94: 0x004f20c4
0x00e88c90: 0x0000003a
0x00e88c8c: 0x00000000
0x00e88c88: 0x0000000a
0x00e88c84: 0x00489f3a
0x00e88c80: 0x00e88d88
0x00e88c7c: 0x00e88e40
0x00e88c78: 0x00e88d7c
0x00e88c74: 0x001087ed
0x00e88c70: 0x00000001
0x00e88c6c: 0x00e88cb0
0x00e88c68: 0x00000002
0x00e88c64: 0x0010885c
0x00e88c60: 0x00e88d30
0x00e88c5c: 0x00727334
0x00e88c58: 0xa0ffffff
0x00e88c54: 0x00e88cb0
0x00e88c50: 0x00000001
0x00e88c4c: 0x00e88cb0
0x00e88c48: 0x00000002
0x00e88c44: 0x0032321b
0x00e88c40: 0x00e88c60
0x00e88c3c: 0x00e88c7f
0x00e88c38: 0x00e88c5c
0x00e88c34: 0x004b1ad5
0x00e88c30: 0x00e88c60
0x00e88c2c: 0x00e88e40
0x00e88c28: 0xa0ffffff
0x00e88c24: 0x00323143
0x00e88c20: 0x00e88c40
0x00e88c1c: 0x00000000
0x00e88c18: 0x00000008
0x00e88c14: 0x0010318c
0x00e88c10-0x00e88c0c: 0x00322f8b
0x00e88c08: 0x00000074
0x00e88c04: 0x00000001
0x00e88c00: 0x00e88bd8
0x00e88bfc: 0x00e88c20
0x00e88bf8: 0x00000000
0x00e88bf4: 0x004f20c4
```

```
0x00e88bf0: 0x000000ff
0x00e88bec: 0x00322f87
0x00e88be8: 0x00f5387e
0x00e88be4: 0x00323021
0x00e88be0: 0x00e88c10
0x00e88bdc: 0x004f20c4
0x00e88bd8: 0x00000000 *
0x00e88bd4: 0x004eabb0
0x00e88bd0: 0x00000001
0x00e88bcc: 0x00f5387e
0x00e88bc8-0x00e88bc4: 0x00000000
0x00e88bc0: 0x00000008
0x00e88bbc: 0x0010318c
0x00e88bb8-0x00e88bb4: 0x00322f8b
0x00e88bb0: 0x00000074
0x00e88bac: 0x00000001
0x00e88ba8: 0x00e88bd8
0x00e88ba4: 0x00e88c20
0x00e88ba0: 0x00000000
0x00e88b9c: 0x004f20c4
0x00e88b98: 0x000000ff
0x00e88b94: 0x001031f2
0x00e88b90: 0x00e88c20
0x00e88b8c: 0xffffffff
0x00e88b88: 0x00e88cb0
0x00e88b84: 0x00320032
0x00e88b80: 0x37303133
0x00e88b7c: 0x312f6574
0x00e88b78: 0x6972772f
0x00e88b74: 0x342f7665
0x00e88b70: 0x64736666
0x00e88b6c: 0x00020000
0x00e88b68: 0x00000010
0x00e88b64: 0x00000001
0x00e88b60: 0x123456cd
0x00e88b5c: 0x00000000
0x00e88b58: 0x00000008

Cisco XXX Firewall Version X.X
Cisco XXX Device Manager Version X.X

Compiled on Fri 15-Nov-04 14:35 by root

hostname up 10 days 0 hours

Hardware:   XXX-XXX, 64 MB RAM, CPU Pentium 200 MHz
Flash i28F640J5 @ 0x300, 16MB
BIOS Flash AT29C257 @ 0xfffd8000, 32KB

0: ethernet0: address is 0003.e300.73fd, irq 10
1: ethernet1: address is 0003.e300.73fe, irq 7
2: ethernet2: address is 00d0.b7c8.139e, irq 9
Licensed Features:
Failover:           Disabled
VPN-DES:            Enabled
VPN-3DES-AES:       Disabled
Maximum Interfaces: 3
Cut-through Proxy:  Enabled
Guards:             Enabled
URL-filtering:      Enabled
Inside Hosts:       Unlimited
Throughput:         Unlimited
IKE peers:          Unlimited
```

```
This XXX has a Restricted (R) license.

Serial Number: 480430455 (0x1ca2c977)
Running Activation Key: 0xc2e94182 0xc21d8206 0x15353200 0x633f6734
Configuration last modified by enable_15 at 13:49:42.148 UTC Wed Nov 20 2004

------------------ show clock ------------------

15:34:28.129 UTC Sun Nov 24 2004

------------------ show memory ------------------

Free memory:        50444824 bytes
Used memory:        16664040 bytes
-------------     ----------------
Total memory:       67108864 bytes

------------------ show conn count ------------------

0 in use, 0 most used

------------------ show xlate count ------------------

0 in use, 0 most used

------------------ show blocks ------------------

  SIZE    MAX    LOW    CNT
     4   1600   1600   1600
    80    400    400    400
   256    500    499    500
  1550   1188    795    927

------------------ show interface ------------------

interface ethernet0 "outside" is up, line protocol is up
  Hardware is i82559 ethernet, address is 0003.e300.73fd
  IP address 172.23.59.232, subnet mask 255.255.0.0
  MTU 1500 bytes, BW 10000 Kbit half duplex
        6139 packets input, 830375 bytes, 0 no buffer
        Received 5990 broadcasts, 0 runts, 0 giants
        0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
        90 packets output, 6160 bytes, 0 underruns
        0 output errors, 13 collisions, 0 interface resets
        0 babbles, 0 late collisions, 47 deferred
        0 lost carrier, 0 no carrier
        input queue (curr/max blocks): hardware (5/128) software (0/2)
        output queue (curr/max blocks): hardware (0/1) software (0/1)
interface ethernet1 "inside" is up, line protocol is down
  Hardware is i82559 ethernet, address is 0003.e300.73fe
  IP address 10.1.1.1, subnet mask 255.255.255.0
  MTU 1500 bytes, BW 10000 Kbit half duplex
        0 packets input, 0 bytes, 0 no buffer
        Received 0 broadcasts, 0 runts, 0 giants
        0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
        1 packets output, 60 bytes, 0 underruns
        0 output errors, 0 collisions, 0 interface resets
        0 babbles, 0 late collisions, 0 deferred
        1 lost carrier, 0 no carrier
        input queue (curr/max blocks): hardware (128/128) software (0/0)
        output queue (curr/max blocks): hardware (0/1) software (0/1)
interface ethernet2 "intf2" is administratively down, line protocol is down
  Hardware is i82559 ethernet, address is 00d0.b7c8.139e
  IP address 127.0.0.1, subnet mask 255.255.255.255
```

```
  MTU 1500 bytes, BW 10000 Kbit half duplex
        0 packets input, 0 bytes, 0 no buffer
        Received 0 broadcasts, 0 runts, 0 giants
        0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
        0 packets output, 0 bytes, 0 underruns
        0 output errors, 0 collisions, 0 interface resets
        0 babbles, 0 late collisions, 0 deferred
        0 lost carrier, 0 no carrier
        input queue (curr/max blocks): hardware (128/128) software (0/0)
        output queue (curr/max blocks): hardware (0/0) software (0/0)

------------------ show cpu usage ------------------

CPU utilization for 5 seconds = 0%; 1 minute: 0%; 5 minutes: 0%

------------------ show process ------------------


     PC       SP       STATE       Runtime    SBASE     Stack Process
Hsi 001e3329 00763e7c 0053e5c8           0 00762ef4 3784/4096 arp_timer
Lsi 001e80e9 00807074 0053e5c8           0 008060fc 3792/4096 FragDBGC
Lwe 00117e3a 009dc2e4 00541d18           0 009db46c 3704/4096 dbgtrace
Lwe 003cee95 009de464 00537718           0 009dc51c 8008/8192 Logger
Hwe 003d2d18 009e155c 005379c8           0 009df5e4 8008/8192 tcp_fast
Hwe 003d2c91 009e360c 005379c8           0 009e1694 8008/8192 tcp_slow
Lsi 002ec97d 00b1a464 0053e5c8           0 00b194dc 3928/4096 xlate clean
Lsi 002ec88b 00b1b504 0053e5c8           0 00b1a58c 3888/4096 uxlate clean
Mrd 002e3a17 00c8f8d4 0053e600           0 00c8d93c 7908/8192 tcp_intercept_times
Lsi 00423dd5 00d3a22c 0053e5c8           0 00d392a4 3900/4096 route_process
Hsi 002d59fc 00d3b2bc 0053e5c8           0 00d3a354 3780/4096 PIX Garbage Collecr
Hwe 0020e301 00d5957c 0053e5c8           0 00d55614 16048/16384 isakmp_time_keepr
Lsi 002d377c 00d7292c 0053e5c8           0 00d719a4 3928/4096 perfmon
Hwe 0020bd07 00d9c12c 0050bb90           0 00d9b1c4 3944/4096 IPSec
Mwe 00205e25 00d9e1ec 0053e5c8           0 00d9c274 7860/8192 IPsec timer handler
Hwe 003864e3 00db26bc 00557920           0 00db0764 6904/8192 qos_metric_daemon
Mwe 00255a65 00dc9244 0053e5c8           0 00dc8adc 1436/2048 IP Background
Lwe 002e450e 00e7bb94 00552c30           0 00e7ad1c 3704/4096 pix/trace
Lwe 002e471e 00e7cc44 00553368           0 00e7bdcc 3704/4096 pix/tconsole
Hwe 001e5368 00e7ed44 00730674           0 00e7ce9c 7228/8192 pix/intf0
Hwe 001e5368 00e80e14 007305d4           0 00e7ef6c 7228/8192 pix/intf1
Hwe 001e5368 00e82ee4 00730534        2470 00e8103c 4892/8192 pix/intf2
H*  001a6ff5 0009ff2c 0053e5b0        4820 00e8511c 12860/16384 ci/console
Csi 002dd8ab 00e8a124 0053e5c8           0 00e891cc 3396/4096 update_cpu_usage
Hwe 002cb4d1 00f2bfbc 0051e360           0 00f2a134 7692/8192 uauth_in
Hwe 003d17d1 00f2e0bc 00828cf0           0 00f2c1e4 7896/8192 uauth_thread
Hwe 003e71d4 00f2f20c 00537d20           0 00f2e294 3960/4096 udp_timer
Hsi 001db3ca 00f30fc4 0053e5c8           0 00f3004c 3784/4096 557mcfix
Crd 001db37f 00f32084 0053ea40   508286220 00f310fc 3688/4096 557poll
Lsi 001db435 00f33124 0053e5c8           0 00f321ac 3700/4096 557timer
Hwe 001e5398 00f441dc 008121e0           0 00f43294 3912/4096 fover_ip0
Cwe 001dcdad 00f4523c 00872b48         120 00f44344 3528/4096 ip/0:0
Hwe 001e5398 00f4633c 008121bc          10 00f453f4 3532/4096 icmp0
Hwe 001e5398 00f47404 00812198           0 00f464cc 3896/4096 udp_thread/0
Hwe 001e5398 00f4849c 00812174           0 00f475a4 3456/4096 tcp_thread/0
Hwe 001e5398 00f495bc 00812150           0 00f48674 3912/4096 fover_ip1
Cwe 001dcdad 00f4a61c 008ea850           0 00f49724 3832/4096 ip/1:1
Hwe 001e5398 00f4b71c 0081212c           0 00f4a7d4 3912/4096 icmp1
Hwe 001e5398 00f4c7e4 00812108           0 00f4b8ac 3896/4096 udp_thread/1
Hwe 001e5398 00f4d87c 008120e4           0 00f4c984 3832/4096 tcp_thread/1
Hwe 001e5398 00f4e99c 008120c0           0 00f4da54 3912/4096 fover_ip2
Cwe 001e542d 00f4fa6c 00730534           0 00f4eb04 3944/4096 ip/2:2
Hwe 001e5398 00f50afc 0081209c           0 00f4fbb4 3912/4096 icmp2
Hwe 001e5398 00f51bc4 00812078           0 00f50c8c 3896/4096 udp_thread/2
Hwe 001e5398 00f52c5c 00812054           0 00f51d64 3832/4096 tcp_thread/2
```

```
Hwe 003d1a65 00f78284 008140f8          0 00f77fdc  300/1024 listen/http1
Mwe 0035cafa 00f7a63c 0053e5c8          0 00f786c4 7640/8192 Crypto CA

------------------ show failover ------------------

No license for Failover

------------------ show traffic ------------------

outside:
        received (in 865565.090 secs):
                6139 packets    830375 bytes
                0 pkts/sec      0 bytes/sec
        transmitted (in 865565.090 secs):
                90 packets      6160 bytes
                0 pkts/sec      0 bytes/sec
inside:
        received (in 865565.090 secs):
                0 packets       0 bytes
                0 pkts/sec      0 bytes/sec
        transmitted (in 865565.090 secs):
                1 packets       60 bytes
                0 pkts/sec      0 bytes/sec
intf2:
        received (in 865565.090 secs):
                0 packets       0 bytes
                0 pkts/sec      0 bytes/sec
        transmitted (in 865565.090 secs):
                0 packets       0 bytes
                0 pkts/sec      0 bytes/sec

------------------ show perfmon ------------------


PERFMON STATS:    Current      Average
Xlates               0/s          0/s
Connections          0/s          0/s
TCP Conns            0/s          0/s
UDP Conns            0/s          0/s
URL Access           0/s          0/s
URL Server Req       0/s          0/s
TCP Fixup            0/s          0/s
TCPIntercept         0/s          0/s
HTTP Fixup           0/s          0/s
FTP Fixup            0/s          0/s
AAA Authen           0/s          0/s
AAA Author           0/s          0/s
AAA Account          0/s          0/s
: End_Test_Crash
```

Related Commands

Command	Description
clear crashinfo	Deletes the contents of the crash file.
crashinfo force	Forces a crash of the security appliance.
crashinfo save disable	Disables crash information from writing to Flash memory.
crashinfo test	Tests the ability of the security appliance to save crash information to a file in Flash memory.

show crashinfo console

To display the configuration setting of the **crashinfo console** command, use the **show crashinfo console** command in privileged EXEC mode.

show crashinfo console

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	—	•

Command History

Release	Modification
7.0(4)	This command was introduced.

Usage Guidelines

Compliance with FIPS 140-2 prohibits the distribution of Critical Secu rity Parameters (keys, passwords, etc.) outside of the crypto boundary (chassis). When the device crashes, due to an assert or checkheaps failure, it is possible that the stack or memory regions dumped to the console contain sensitive data. This output must be suppressed in FIPS-mode.

Examples

```
sw8-5520(config)# show crashinfo console
crashinfo console enable
```

Related Commands

Command	Description
clear configure fips	Clears the system or module FIPS configuration information stored in NVRAM.
crashinfo console disable	Disables the reading, writing and configuration of crash write info to flash.
fips enable	Enables or disablea policy-checking to enforce FIPS compliance on the system or module.

Command	Description
fips self-test poweron	Executes power-on self-tests.
show running-config fips	Displays the FIPS configuration that is running on the security appliance.

show crypto accelerator statistics

To display the global and accelerator-specific statistics from the hardware crypto accelerator MIB, use the **show crypto accelerator statistics** command in global configuration or privileged EXEC mode.

show crypto accelerator statistics

Syntax Description

This command has no keywords or variables.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	•	•	—	—
Privileged EXEC	•	•	•	—	—

Command History

Release	Modification
7.0(1)	This command was introduced.

Usage Guidelines

The output statistics are defined as follows:

Accelerator 0 is the software-based crypto engine.

Accelerator 1 is the hardware-based crypto engine.

RSA statistics show RSA operations for 2048-bit keys, which are only executed in software. This means that when you have a 2048-bit key, IKE/SSL VPN performs RSA operations in software during the IPSec/SSL negotiation phase. Actual IPSec/SSL traffic is still processed using hardware. This may cause high CPU if there are many simultaneous sessions starting at the same time, which may result in multiple RSA key operations and high CPU. If you run into a high CPU condition because of this, then you should use a 1024-bit key to process RSA key operations in hardware. To do so, you must reenroll the identity certificate.

If you are using a 2048-bit RSA key and the RSA processing is performed in software, you can use CPU profiling to determine which functions are causing high CPU usage. Generally, the bn_* and BN_* functions are math operations on the large data sets used for RSA, and are the most useful when examining CPU usage during an RSA operation in software. For example:

```
@@@@@@@@@@@@@@@@@@@@............................... 36.50% : _bn_mul_add_words
@@@@@@@@@@.......................................... 19.75% : _bn_sqr_comba8
```

Diffie-Hellman statistics show that any crypto operation with a modulus size greater than 1024 is performed in software (for example, DH5 (Diffie-Hellman group 5 uses 1536)). If so, a 2048-bit key certificate will be processed in software, which can result in high CPU usage when a lot of sessions are running.

Note Only the ASA 5580 (with a Cavium crypto chip) supports hardware-accelerated 2048-bit RSA key generation. The ASA 5510, 5520, 5540, and 5550 do not support hardware-accelerated 2048-bit key generation. The ASA 5505 (with a Cavium CN505 processor) only supports Diffie-Hellman Groups 1 and 2 for hardware-accelerated, 768-bit and 1024-bit key generation. Diffie-Hellman Group 5 (1536-bit key generation) is performed in software.

A single crypto engine in the adaptive security appliance performs the IPSec and SSL operations. To display the versions of crypto (Cavium) microcode that are loaded into the hardware crypto accelerator at boot time, enter the **show version** command. For example:

```
hostname(config) show version

Cisco Adaptive Security Appliance Software Version 8.0(4)8
Device Manager Version 6.1(5)
Compiled on Wed 15-Oct-09 17:27 by builders
System image file is "disk0:/interim/asa804-8-k8.bin"
Config file at boot was "startup-config"
asa up 5 days 17 hours
Hardware:   ASA5505, 512 MB RAM, CPU Geode 500 MHz
Internal ATA Compact Flash, 512MB
BIOS Flash M50FW080 @ 0xffe00000, 1024KB
Encryption hardware device : Cisco ASA-5505 on-board accelerator (revision 0x0)
                             Boot microcode   : CN1000-MC-BOOT-2.00
                             SSL/IKE microcode: CNLite-MC-SSLm-PLUS-2.03
                             IPSec microcode  : CNlite-MC-IPSECm-MAIN-2.05
```

DSA statistics show key generation in two phases. The first phase is a choice of algorithm parameters, which may be shared between different users of the system. The second phase computes private and public keys for a single user.

SSL statistics show records for the processor-intensive public key encryption algorithms involved in SSL transactions to the hardware crypto accelerator.

RNG statistics show records for a sender and receiver, which can generate the same set of random numbers automatically to use as keys.

Examples

The following example, entered in global configuration mode, shows global crypto accelerator statistics:

```
hostname # show crypto accelerator statistics

Crypto Accelerator Status
-------------------------
[Capacity]
   Supports hardware crypto: True
   Supports modular hardware crypto: False
   Max accelerators: 1
   Max crypto throughput: 100 Mbps
   Max crypto connections: 750
[Global Statistics]
   Number of active accelerators: 1
   Number of non-operational accelerators: 0
   Input packets: 700
   Input bytes: 753488
```

```
   Output packets: 700
   Output error packets: 0
   Output bytes: 767496
[Accelerator 0]
   Status: Active
   Software crypto engine
   Slot: 0
   Active time: 167 seconds
   Total crypto transforms: 7
   Total dropped packets: 0
   [Input statistics]
      Input packets: 0
      Input bytes: 0
      Input hashed packets: 0
      Input hashed bytes: 0
      Decrypted packets: 0
      Decrypted bytes: 0
   [Output statistics]
      Output packets: 0
      Output bad packets: 0
      Output bytes: 0
      Output hashed packets: 0
      Output hashed bytes: 0
      Encrypted packets: 0
      Encrypted bytes: 0
   [Diffie-Hellman statistics]
      Keys generated: 0
      Secret keys derived: 0
   [RSA statistics]
      Keys generated: 0
      Signatures: 0
      Verifications: 0
      Encrypted packets: 0
      Encrypted bytes: 0
      Decrypted packets: 0
      Decrypted bytes: 0
   [DSA statistics]
      Keys generated: 0
      Signatures: 0
      Verifications: 0
   [SSL statistics]
      Outbound records: 0
      Inbound records: 0
   [RNG statistics]
      Random number requests: 98
      Random number request failures: 0
[Accelerator 1]
   Status: Active
   Encryption hardware device : Cisco ASA-55x0 on-board accelerator
(revision 0x0)
                              Boot microcode   : CNlite-MC-Boot-Cisco-1.2
                              SSL/IKE microcode: CNlite-MC-IPSEC-Admin-3.03
                              IPSec microcode  : CNlite-MC-IPSECm-MAIN-2.03
   Slot: 1
   Active time: 170 seconds
   Total crypto transforms: 1534
   Total dropped packets: 0
   [Input statistics]
      Input packets: 700
      Input bytes: 753544
      Input hashed packets: 700
      Input hashed bytes: 736400
      Decrypted packets: 700
      Decrypted bytes: 719944
```

```
[Output statistics]
   Output packets: 700
   Output bad packets: 0
   Output bytes: 767552
   Output hashed packets: 700
   Output hashed bytes: 744800
   Encrypted packets: 700
   Encrypted bytes: 728352
[Diffie-Hellman statistics]
   Keys generated: 97
   Secret keys derived: 1
[RSA statistics]
   Keys generated: 0
   Signatures: 0
   Verifications: 0
   Encrypted packets: 0
   Encrypted bytes: 0
   Decrypted packets: 0
   Decrypted bytes: 0
[DSA statistics]
   Keys generated: 0
   Signatures: 0
   Verifications: 0
[SSL statistics]
   Outbound records: 0
   Inbound records: 0
[RNG statistics]
   Random number requests: 1
   Random number request failures: 0
```

Related Commands

Command	Description
clear crypto accelerator statistics	Clears the global and accelerator-specific statistics in the crypto accelerator MIB.
clear crypto protocol statistics	Clears the protocol-specific statistics in the crypto accelerator MIB.
show crypto protocol statistics	Displays the protocol-specific statistics from the crypto accelerator MIB.

show crypto ca certificates

To display the certificates associated with a specific trustpoint or to display all the certificates installed on the system, use the **show crypto ca certificates** command in global configuration or privileged EXEC mode.

show crypto ca certificates [*trustpointname*]

Syntax Description

trustpointname	(Optional) The name of a trustpoint. If you do not specify a name, this command displays all certificates installed on the system.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	•	•	•	—
Privileged EXEC	•	•	•	•	—

Command History

Release	Modification
7.0(1)	This command was introduced.

Examples

The following example entered in global configuration mode, displays a CA certificate for a trustpoint named tp1:

```
hostname(config)# show crypto ca certificates tp1
CA Certificate
    Status: Available
    Certificate Serial Number 2957A3FF296EF854FD0D6732FE25B45
    Certificate Usage: Signature
    Issuer:
        CN = ms-root-sha-06-2004
        OU = rootou
        O = cisco
        L = franklin
        ST - massachusetts
        C = US
        EA = a@b.con
    Subject:
        CN = ms-root-sha-06-2004
        OU = rootou
        O = cisco
        L = franklin
        ST = massachusetts
        C = US
        EA = a@b.com
```

```
    CRL Distribution Point
        ldap://w2kadvancedsrv/CertEnroll/ms-root-sha-06-2004.crl
    Validity Date:
        start date: 14:11:40 UTC Jun 26 2004
        end date: 14:01:30 UTC Jun 4 2022
    Associated Trustpoints: tp2 tp1
hostname(config)#
```

Related Commands

Command	Description
crypto ca authenticate	Obtains a CA certificate for a specified trustpoint.
crypto ca crl request	Requests a CRL based on the configuration parameters of a specified trustpoint.
crypto ca enroll	Initiates the enrollment process with a CA.
crypto ca import	Imports a certificate to a specified trustpoint.
crypto ca trustpoint	Enters trustpoint mode for a specified trustpoint.

show crypto ca crls

To display all cached CRLs or to display all CRLs cached for a specified trustpoint, use the **show crypto ca crls** command in global configuration or privileged EXEC mode.

show crypto ca crls [*trustpointname*]

Syntax Description

trustpointname	(Optional) The name of a trustpoint. If you do not specify a name, this command displays all CRLs cached on the system.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	•	•	•	
Privileged EXEC	•	•	•	•	

Command History

Release	Modification
7.0(1)	This command was introduced.

Examples

The following example entered in global configuration mode, displays a CRL for a trustpoint named tp1:

```
hostname(config)# show crypto ca crls tp1
CRL Issuer Name:
    cn=ms-sub1-ca-5-2004,ou=Franklin DevTest,o=Cisco
Systems,l=Franklin,st=MA,c=US,ea=user@cisco.com
    LastUpdate: 19:45:53 UTC Dec 24 2004
    NextUpdate: 08:05:53 UTC Jan 1 2005
    Retrieved from CRL Distribution Point:
      http://win2k-ad2.frk-ms-pki.cisco.com/CertEnroll/ms-sub1-ca-5-2004.crl
    Associated Trustpoints: tp1
hostname(config)#
```

Related Commands

Command	Description
crypto ca authenticate	Obtains a CA certificate for a specified trustpoint.
crypto ca crl request	Requests a CRL based on the configuration parameters of a specified trustpoint.
crypto ca enroll	Initiates the enrollment process with a CA.
crypto ca import	Imports a certificate to a specified trustpoint.
crypto ca trustpoint	Enters trustpoint mode for a specified trustpoint.

show crypto ca server

To display the status of the local Certificate Authority (CA) configuration on the security appliance, use the **show crypto ca server** command.

show crypto ca server

Syntax Description

This command has no keywords or arguments.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
CA server configuration	•	—	•	—	—
Global configuration	•	—	•	—	—
Privileged EXEC	•	—	•	—	—

Command History

Release	Modification
8.0(2)	This command was introduced.

Examples

The following example displays the status of all configuration data for the local CA server:

```
hostname# show crypto ca server
#Certificate Server LOCAL-CA-SERVER:
    Status: disabled
    State: disabled
    Server's configuration is unlocked (enter "no shutdown" to lock it)
    Issuer name: CN=asa1.cisco.com
    CA cert fingerprint: -Not found-
    Last certificate issued serial number: 0x0
    CA certificate expiration timer: 00:00:00 UTC Jan 1 1970
    CRL not present.
    Current primary storage dir: nvram:
hostname#
```

Related Commands

Command	Description
crypto ca server	Provides access to the CA Server Configuration mode CLI command set, which allows you to configure and manage the local CA.
debug crypto ca server	Shows debug messages when you configure the local CA server.

Command	Description
show crypto ca server certificate	Displays the certificate of the local CA in base64 format.
show crypto ca server crl	Displays the lifetime of the local CA CRL.

show crypto ca server cert-db

To display all or a subset of local Certificate Authority (CA) server certificates including those issued to a specific user, use the **show crypto ca server cert-db** command.

show crypto ca server cert-db [user *username* **| allowed | enrolled | expired | on-hold]**
[serial *certificate-serial-number*]

EW Note???: Per AP, this command will change; currently undefined. Bug #CSCsg36072. Cert # OK now.

Syntax Description

allowed	Specifies that users who are allowed to enroll display, regardless of the status of their certificate.
enrolled	Specifies that users with valid certificates display.
expired	Specifies that users holding expired certificates display.
on-hold	Specifies that users who have not enrolled yet display.
serial *certificate-serial-number*	Specifies the serial number of a specific certificate that is to be displayed. Enter the serial number in hexadecimal format.
user *username*	Specifies the certificate owner. The username can be a simple username or e-mail address.

Defaults

By default, if no username or certificate serial number are specified, the entire database of issued certificates displays.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
CA server configuration	•	—	•	—	—
Global configuration	•	—	•	—	—
Privileged EXEC	•	—	•	—	—

Command History

Release	Modification
8.0(2)	This command was introduced.

Usage Guidelines

The **show crypto ca server cert-db** command displays a list of the user certificates issued by the local CA server. You can display a subset of the certificate database by specifying a specific user name with one or more of the optional certificate-type keywords, and/or with an optional certificate serial number.

If you specify a user name without a keyword or a serial number, all of the certificates issued for that user display. For each user, the display shows the user name, the *renewal allowed till* field, the *number of times the user is notified* count, and the *PKCS12 file stored till* value before listing each certificate issued for that user.

Each certificate displays with the certificate serial number, the issued and expired dates, and the certificate status (Revoked/Not Revoked).

Examples

The following example requests display of all of the certificates issued for Janedoe by the CA server:

```
hostname# show crypto ca server cert-db user janedoe
```

The following example requests the display of all the certificates issued by the local CA server with a serial number of 0x100 and above:

```
hostname# show crypto ca server cert-db serial 1oo
```

The following example requests display of all of the certificates issued by the local CA server:

```
hostname# show crypto ca server cert-db
```

Related Commands

Command	Description
crypto ca server	Provides access to the CA Server Configuration mode CLI command set, which allows you to configure and manage the local CA.
crypto ca server revoke	Marks a certificate issued by the local CA server as revoked in both the certificate database and Certificate Revocation List (CRL).
lifetime crl	Specifies the lifetime of the certificate revocation list.

show crypto ca server certificate

To display the certificate for the local Certificate Authority (CA) server in base64 format, use the **show crypto ca server certificate** command.

show crypto ca server certificate

Syntax Description

This command has no keywords or arguments.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
CA server configuration	•	—	•	—	—
Global configuration	•	—	•	—	—
Privileged EXEC	•	—	•	—	—

Command History

Release	Modification
8.0(2)	This command was introduced.

Usage Guidelines

The **show crypto ca server certificate** command displays the local CA server certificate in base64 format. This allows you to cut and paste a certificate while exporting it to other devices that need to trust the local CA server.

Examples

The following example displays the server certificate for the local CA server:

```
hostname# show crypto ca server certificate
The base64 encoded local CA certificate follows:
MIIXlwIBAzCCF1EGCSqGSIb3DQEHAaCCF0IEghc+MIIXOjCCFzYGCSqGSIb3DQEHBqCCFycwghcjAgEAMIIXHAYJKo
ZIhvcNAQcBMBsGCiqGSIb3DQEMAQMwDQQIjph4SxJoyTgCAQGAghbw3v4bFy+GGG2dJnB4OLphsUM+IG3SDOiDwZG9
n1SvtMieoxd7Hxknxbum06JDrujWKtHBIqkrm+td34qlNE1iGeP2YC94/NQ2z+4kS+uZzwcRhl1KEZTS1E4L0fSaC3
uMTxJq2NUHYWmoc8pi4CIeLj3h7VVMy6qbx2AC8I+q57+QG5vG5l5Hi5imwtYfaWwPEdPQxaWZPrzoG1J8BFqdPa1j
BGhAzzuSmElm3j/2dQ3Atro1G9nIsRHgV39fcBgwz4fEabHG7/Vanb+fj81d5nlOiJjDYYbP86tvbZ2yOVZR6aKFVI
0b2AfCr6PbwfC9U8Z/aF3BCyM2sN2xPJrXva94CaYrqyotZdAkSYA5KWScyEcgdqmuBeGDKOncTknfgy0XM+fG5rb3
qAXy1GkjyFI5Bm9Do6RUROoG1DSrQrKeq/hj….

hostname#
```

Related Commands

Command	Description
crypto ca server	Provides access to CA Server Configuration mode CLI command set, which allows you to configure and manage a local CA.
issuer-name	Specifies the subject-name DN of the certificate authority certificate.
keysize	Specifies the size of the public and private keys generated at user certificate enrollment.
lifetime	Specifies the lifetime of the CA certificate and issued certificates.
show crypto ca server	Displays the local CA configuration in ASCII text format.

show crypto ca server crl

To display the current Certificate Revocation List (CRL) of the local Certificate Authority (CA) use the **show crypto ca server crl** command.

show crypto ca server crl

Syntax Description

This command has no keywords or arguments.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
CA server configuration	•	—	•	—	—
Global configuration	•	—	•	—	—
Privileged EXEC	•	—	•	—	—

Command History

Release	Modification
8.0(2)	This command was introduced.

Examples

The following example displays the current CRL the embedded CA server:

```
hostname# show crypto ca server crl
asa5540(config)# sh cry ca ser crl
Certificate Revocation List:
    Issuer: cn=asa5540.frqa.cisco.com
    This Update: 07:32:27 UTC Oct 16 2006
    Next Update: 13:32:27 UTC Oct 16 2006
    Number of CRL entries: 0
    CRL size: 232 bytes
asa5540(config)#
hostname#
```

Related Commands

Command	Description
cdp-url	Specifies the Certificate Revocation List (CRL) distribution point (CDP) to be include in the certificates issued by the CA.
crypto ca server	Provides access to the CA Server Configuration mode CLI command set, which allows you to configure and manage the local CA.
crypto ca server revoke	Marks a certificate issued by the local CA server as revoked in the certificate database and CRL.

Command	Description
lifetime crl	Specifies the lifetime of the Certificate Revocation List (CRL).
show crypto ca server	Displays the status of the CA configuration.

show crypto ca server user-db

To display users included in the local Certificate Authority (CA) server user database, use the **show crypto ca server user-db** command.

show crypto ca server user-db [**expired** | **allowed** | **on-hold** | **enrolled**]

Syntax Description

allowed	(Optional) Specifies that users who are allowed to enroll display, regardless of the status of their certificate.
enrolled	(Optional) Specifies that users with valid certificates display.
expired	(Optional) Specifies that users holding expired certificates display.
on-hold	(Optional) Specifies that users who have not enrolled yet display.

Defaults

By default, all users in the database display if no keywords are entered.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
CA server configuration	•	—	•	—	—
Global configuration	•	—	•	—	—
Privileged EXEC	•	—	•	—	—

Command History

Release	Modification
8.0(2)	This command was introduced.

Examples

The following example displays currently enrolled users:

```
hostname# crypto ca server user-db enrolled
Username   DN               Certificate issued    Certificate expiration
jandoe     cn=Jan Doe,o=...   5/31/2006             5/31/2007

hostname#
```

Related Commands

Command	Description
crypto ca server user-db add	Adds a user to the CA server user database.
crypto ca server user-db allow	Allows a specific user or a subset of users in the CA server database to enroll with the local CA.
crypto ca server user-db remove	Removes a user from the CA server user database.

Command	Description
crypto ca server user-db write	Writes user information configured in the local CA database to storage..
show crypto ca server cert-db	Displays all certificates issued by the local CA.

show crypto ipsec df-bit

To display the IPSec DF-bit policy for IPSec packets for a specified interface, use the **show crypto ipsec df-bit** command in global configuration mode and privileged EXEC mode.

show crypto ipsec df-bit *interface*

Syntax Description

interface	Specifies an interface name.

Defaults

No default behaviors or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	•	•	—	—
Privileged EXEC	•	•	•	—	—

Command History

Release	Modification
7.0(1)	This command was introduced.

Examples

The following example displays the IPSec DF-bit policy for interface named inside:

```
hostname(config)# show crypto ipsec df-bit inside
df-bit inside copy
hostname(config)#
```

Related Commands

Command	Description
crypto ipsec df-bit	Configures the IPSec DF-bit policy for IPSec packets.
crypto ipsec fragmentation	Configures the fragmentation policy for IPSec packets.
show crypto ipsec fragmentation	Displays the fragmentation policy for IPSec packets.

show crypto ipsec fragmentation

To display the fragmentation policy for IPSec packets, use the **show crypto ipsec fragmentation** command in global configuration or privileged EXEC mode.

show crypto ipsec fragmentation *interface*

Syntax Description

interface	Specifies an interface name.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	•	•	—	—
Privileged EXEC	•	•	•	—	—

Command History

Release	Modification
7.0	This command was introduced.

Examples

The following example, entered in global configuration mode, displays the IPSec fragmentation policy for an interface named inside:

```
hostname(config)# show crypto ipsec fragmentation inside
fragmentation inside before-encryption
hostname(config)#
```

Related Commands

Command	Description
crypto ipsec fragmentation	Configures the fragmentation policy for IPSec packets.
crypto ipsec df-bit	Configures the DF-bit policy for IPSec packets.
show crypto ipsec df-bit	Displays the DF-bit policy for a specified interface.

show crypto ipsec sa

To display a list of IPSec SAs, use the **show crypto ipsec sa** command in global configuration mode or privileged EXEC mode. You can also use the alternate form of this command: **show ipsec sa**.

show crypto ipsec sa [**entry | identity | map** *map-name* **| peer** *peer-addr*] [**detail**]

Syntax Description

detail	(Optional) Displays detailed error information on what is displayed.
entry	(Optional) Displays IPSec SAs sorted by peer address
identity	(Optional) Displays IPSec SAs for sorted by identity, not including ESPs. This is a condensed form.
map *map-name*	(Optional) Displays IPSec SAs for the specified crypto map.
peer *peer-addr*	(Optional) Displays IPSec SAs for specified peer IP addresses.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
Global configuration	•	•	•	—	—
Privileged EXEC	•	•	•	—	—

Command History

Release	Modification
Preexisting	This command was preexisting.

Examples

The following example, entered in global configuration mode, displays IPSec SAs.

```
hostname(config)# show crypto ipsec sa
interface: outside2
    Crypto map tag: def, local addr: 10.132.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (172.20.0.21/255.255.255.255/0/0)
      current_peer: 172.20.0.21
      dynamic allocated peer ip: 10.135.1.5

      #pkts encaps: 0, #pkts encrypt: 0, #pkts digest: 0
      #pkts decaps: 1145, #pkts decrypt: 1145, #pkts verify: 1145
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 0, #pkts comp failed: 0, #pkts decomp failed: 0
      #pre-frag successes: 2, #pre-frag failures: 1, #fragments created: 10
      #PMTUs sent: 5, #PMTUs rcvd: 2, #decapstulated frags needing reassembly: 1
      #send errors: 0, #recv errors: 0
```

```
      local crypto endpt.: 10.132.0.17, remote crypto endpt.: 172.20.0.21

      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: DC15BF68

    inbound esp sas:
      spi: 0x1E8246FC (511854332)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 3, crypto-map: def
         sa timing: remaining key lifetime (sec): 548
         IV size: 8 bytes
         replay detection support: Y
    outbound esp sas:
      spi: 0xDC15BF68 (3692412776)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 3, crypto-map: def
         sa timing: remaining key lifetime (sec): 548
         IV size: 8 bytes
         replay detection support: Y

    Crypto map tag: def, local addr: 10.132.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
hostname(config)#
```

Note Fragmentation statistics are pre-fragmentation statistics if the IPSec SA policy states that fragmentation occurs before IPSec processing. Post-fragmentation statistics appear if the SA policy states that fragmentation occurs after IPSec processing.

The following example, entered in global configuration mode, displays IPSec SAs for a crypto map named def.

```
hostname(config)# show crypto ipsec sa map def
cryptomap: def
    Crypto map tag: def, local addr: 172.20.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (10.132.0.21/255.255.255.255/0/0)
      current_peer: 10.132.0.21
      dynamic allocated peer ip: 90.135.1.5

      #pkts encaps: 0, #pkts encrypt: 0, #pkts digest: 0
      #pkts decaps: 1146, #pkts decrypt: 1146, #pkts verify: 1146
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 0, #pkts comp failed: 0, #pkts decomp failed: 0
      #send errors: 0, #recv errors: 0

      local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.132.0.21

      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: DC15BF68

    inbound esp sas:
      spi: 0x1E8246FC (511854332)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 3, crypto-map: def
         sa timing: remaining key lifetime (sec): 480
         IV size: 8 bytes
         replay detection support: Y
```

```
    outbound esp sas:
      spi: 0xDC15BF68 (3692412776)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 3, crypto-map: def
         sa timing: remaining key lifetime (sec): 480
         IV size: 8 bytes
         replay detection support: Y

    Crypto map tag: def, local addr: 172.20.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (192.168.132.0/255.255.255.0/0/0)
      current_peer: 10.135.1.8
      dynamic allocated peer ip: 0.0.0.0

      #pkts encaps: 73672, #pkts encrypt: 73672, #pkts digest: 73672
      #pkts decaps: 78824, #pkts decrypt: 78824, #pkts verify: 78824
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 73672, #pkts comp failed: 0, #pkts decomp failed: 0
      #send errors: 0, #recv errors: 0

      local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.135.1.8

      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: 3B6F6A35

    inbound esp sas:
      spi: 0xB32CF0BD (3006066877)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 4, crypto-map: def
         sa timing: remaining key lifetime (sec): 263
         IV size: 8 bytes
         replay detection support: Y
    outbound esp sas:
      spi: 0x3B6F6A35 (997157429)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 4, crypto-map: def
         sa timing: remaining key lifetime (sec): 263
         IV size: 8 bytes
         replay detection support: Y
hostname(config)#
```

The following example, entered in global configuration mode, shows IPSec SAs for the keyword **entry**.

```
hostname(config)# show crypto ipsec sa entry
peer address: 10.132.0.21
    Crypto map tag: def, local addr: 172.20.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (10.132.0.21/255.255.255.255/0/0)
      current_peer: 10.132.0.21
      dynamic allocated peer ip: 90.135.1.5

      #pkts encaps: 0, #pkts encrypt: 0, #pkts digest: 0
      #pkts decaps: 1147, #pkts decrypt: 1147, #pkts verify: 1147
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 0, #pkts comp failed: 0, #pkts decomp failed: 0
      #send errors: 0, #recv errors: 0

      local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.132.0.21
```

```
      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: DC15BF68

    inbound esp sas:
      spi: 0x1E8246FC (511854332)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 3, crypto-map: def
         sa timing: remaining key lifetime (sec): 429
         IV size: 8 bytes
         replay detection support: Y
    outbound esp sas:
      spi: 0xDC15BF68 (3692412776)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 3, crypto-map: def
         sa timing: remaining key lifetime (sec): 429
         IV size: 8 bytes
         replay detection support: Y

peer address: 10.135.1.8
    Crypto map tag: def, local addr: 172.20.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (192.168.132.0/255.255.255.0/0/0)
      current_peer: 10.135.1.8
      dynamic allocated peer ip: 0.0.0.0

      #pkts encaps: 73723, #pkts encrypt: 73723, #pkts digest: 73723
      #pkts decaps: 78878, #pkts decrypt: 78878, #pkts verify: 78878
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 73723, #pkts comp failed: 0, #pkts decomp failed: 0
      #send errors: 0, #recv errors: 0

      local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.135.1.8

      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: 3B6F6A35

    inbound esp sas:
      spi: 0xB32CF0BD (3006066877)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 4, crypto-map: def
         sa timing: remaining key lifetime (sec): 212
         IV size: 8 bytes
         replay detection support: Y
    outbound esp sas:
      spi: 0x3B6F6A35 (997157429)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 4, crypto-map: def
         sa timing: remaining key lifetime (sec): 212
         IV size: 8 bytes
         replay detection support: Y
hostname(config)#
```

The following example, entered in global configuration mode, shows IPSec SAs with the keywords **entry detail**.

```
hostname(config)# show crypto ipsec sa entry detail
peer address: 10.132.0.21
    Crypto map tag: def, local addr: 172.20.0.17
```

```
      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (10.132.0.21/255.255.255.255/0/0)
      current_peer: 10.132.0.21
      dynamic allocated peer ip: 90.135.1.5

      #pkts encaps: 0, #pkts encrypt: 0, #pkts digest: 0
      #pkts decaps: 1148, #pkts decrypt: 1148, #pkts verify: 1148
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 0, #pkts comp failed: 0, #pkts decomp failed: 0
      #pkts no sa (send): 0, #pkts invalid sa (rcv): 0
      #pkts encaps failed (send): 0, #pkts decaps failed (rcv): 0
      #pkts invalid prot (rcv): 0, #pkts verify failed: 0
      #pkts invalid identity (rcv): 0, #pkts invalid len (rcv): 0
      #pkts replay rollover (send): 0, #pkts replay rollover (rcv): 0
      #pkts replay failed (rcv): 0
      #pkts internal err (send): 0, #pkts internal err (rcv): 0

      local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.132.0.21

      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: DC15BF68

    inbound esp sas:
      spi: 0x1E8246FC (511854332)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 3, crypto-map: def
         sa timing: remaining key lifetime (sec): 322
         IV size: 8 bytes
         replay detection support: Y
    outbound esp sas:
      spi: 0xDC15BF68 (3692412776)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 3, crypto-map: def
         sa timing: remaining key lifetime (sec): 322
         IV size: 8 bytes
         replay detection support: Y

peer address: 10.135.1.8
    Crypto map tag: def, local addr: 172.20.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (192.168.132.0/255.255.255.0/0/0)
      current_peer: 10.135.1.8
      dynamic allocated peer ip: 0.0.0.0

      #pkts encaps: 73831, #pkts encrypt: 73831, #pkts digest: 73831
      #pkts decaps: 78989, #pkts decrypt: 78989, #pkts verify: 78989
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 73831, #pkts comp failed: 0, #pkts decomp failed: 0
      #pkts no sa (send): 0, #pkts invalid sa (rcv): 0
      #pkts encaps failed (send): 0, #pkts decaps failed (rcv): 0
      #pkts invalid prot (rcv): 0, #pkts verify failed: 0
      #pkts invalid identity (rcv): 0, #pkts invalid len (rcv): 0
      #pkts replay rollover (send): 0, #pkts replay rollover (rcv): 0
      #pkts replay failed (rcv): 0
      #pkts internal err (send): 0, #pkts internal err (rcv): 0

      local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.135.1.8

      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: 3B6F6A35
```

```
    inbound esp sas:
      spi: 0xB32CF0BD (3006066877)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 4, crypto-map: def
         sa timing: remaining key lifetime (sec): 104
         IV size: 8 bytes
         replay detection support: Y
    outbound esp sas:
      spi: 0x3B6F6A35 (997157429)
         transform: esp-3des esp-md5-hmac
         in use settings ={RA, Tunnel, }
         slot: 0, conn_id: 4, crypto-map: def
         sa timing: remaining key lifetime (sec): 104
         IV size: 8 bytes
         replay detection support: Y
hostname(config)#
```

The following example shows IPSec SAs with the keyword **identity**.

```
hostname(config)# show crypto ipsec sa identity
interface: outside2
    Crypto map tag: def, local addr: 172.20.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (10.132.0.21/255.255.255.255/0/0)
      current_peer: 10.132.0.21
      dynamic allocated peer ip: 90.135.1.5

      #pkts encaps: 0, #pkts encrypt: 0, #pkts digest: 0
      #pkts decaps: 1147, #pkts decrypt: 1147, #pkts verify: 1147
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 0, #pkts comp failed: 0, #pkts decomp failed: 0
      #send errors: 0, #recv errors: 0

      local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.132.0.21

      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: DC15BF68

    Crypto map tag: def, local addr: 172.20.0.17

      local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
      remote ident (addr/mask/prot/port): (192.168.132.0/255.255.255.0/0/0)
      current_peer: 10.135.1.8
      dynamic allocated peer ip: 0.0.0.0

      #pkts encaps: 73756, #pkts encrypt: 73756, #pkts digest: 73756
      #pkts decaps: 78911, #pkts decrypt: 78911, #pkts verify: 78911
      #pkts compressed: 0, #pkts decompressed: 0
      #pkts not compressed: 73756, #pkts comp failed: 0, #pkts decomp failed: 0
      #send errors: 0, #recv errors: 0

      local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.135.1.8

      path mtu 1500, ipsec overhead 60, media mtu 1500
      current outbound spi: 3B6F6A35
```

The following example shows IPSec SAs with the keywords **identity** and **detail**.

```
hostname(config)# show crypto ipsec sa identity detail
interface: outside2
    Crypto map tag: def, local addr: 172.20.0.17
```

```
    local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
    remote ident (addr/mask/prot/port): (10.132.0.21/255.255.255.255/0/0)
    current_peer: 10.132.0.21
    dynamic allocated peer ip: 90.135.1.5

    #pkts encaps: 0, #pkts encrypt: 0, #pkts digest: 0
    #pkts decaps: 1147, #pkts decrypt: 1147, #pkts verify: 1147
    #pkts compressed: 0, #pkts decompressed: 0
    #pkts not compressed: 0, #pkts comp failed: 0, #pkts decomp failed: 0
    #pkts no sa (send): 0, #pkts invalid sa (rcv): 0
    #pkts encaps failed (send): 0, #pkts decaps failed (rcv): 0
    #pkts invalid prot (rcv): 0, #pkts verify failed: 0
    #pkts invalid identity (rcv): 0, #pkts invalid len (rcv): 0
    #pkts replay rollover (send): 0, #pkts replay rollover (rcv): 0
    #pkts replay failed (rcv): 0
    #pkts internal err (send): 0, #pkts internal err (rcv): 0

    local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.132.0.21

    path mtu 1500, ipsec overhead 60, media mtu 1500
    current outbound spi: DC15BF68

  Crypto map tag: def, local addr: 172.20.0.17

    local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
    remote ident (addr/mask/prot/port): (192.168.132.0/255.255.255.0/0/0)
    current_peer: 10.135.1.8
    dynamic allocated peer ip: 0.0.0.0

    #pkts encaps: 73771, #pkts encrypt: 73771, #pkts digest: 73771
    #pkts decaps: 78926, #pkts decrypt: 78926, #pkts verify: 78926
    #pkts compressed: 0, #pkts decompressed: 0
    #pkts not compressed: 73771, #pkts comp failed: 0, #pkts decomp failed: 0
    #pkts no sa (send): 0, #pkts invalid sa (rcv): 0
    #pkts encaps failed (send): 0, #pkts decaps failed (rcv): 0
    #pkts invalid prot (rcv): 0, #pkts verify failed: 0
    #pkts invalid identity (rcv): 0, #pkts invalid len (rcv): 0
    #pkts replay rollover (send): 0, #pkts replay rollover (rcv): 0
    #pkts replay failed (rcv): 0
    #pkts internal err (send): 0, #pkts internal err (rcv): 0

    local crypto endpt.: 172.20.0.17, remote crypto endpt.: 10.135.1.8

    path mtu 1500, ipsec overhead 60, media mtu 1500
    current outbound spi: 3B6F6A35
```

Related Commands

Command	Description
clear configure isakmp	Clears all the ISAKMP configuration.
clear configure isakmp policy	Clears all ISAKMP policy configuration.
clear isakmp sa	Clears the IKE runtime SA database.
isakmp enable	Enables ISAKMP negotiation on the interface on which the IPSec peer communicates with the security appliance.
show running-config isakmp	Displays all the active ISAKMP configuration.

show crypto ipsec stats

To display a list of IPSec statistics, use the **show crypto ipsec stats** command in global configuration mode or privileged EXEC mode.

show crypto ipsec stats

Syntax Description

This command has no keywords or variables.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	•	•	—	—
Privileged EXEC	•	•	•	—	—

Command History

Release	Modification
7.0	This command was introduced.

Examples

The following example, entered in global configuration mode, displays IPSec statistics:

```
hostname(config)# show crypto ipsec stats

IPsec Global Statistics
-----------------------
Active tunnels: 2
Previous tunnels: 9
Inbound
    Bytes: 4933013
    Decompressed bytes: 4933013
    Packets: 80348
    Dropped packets: 0
    Replay failures: 0
    Authentications: 80348
    Authentication failures: 0
    Decryptions: 80348
    Decryption failures: 0
    Decapsulated fragments needing reassembly: 0
Outbound
    Bytes: 4441740
    Uncompressed bytes: 4441740
    Packets: 74029
    Dropped packets: 0
    Authentications: 74029
    Authentication failures: 0
    Encryptions: 74029
```

```
    Encryption failures: 0
    Fragmentation successes: 3
        Pre-fragmentation successes:2
        Post-fragmentation successes: 1
    Fragmentation failures: 2
        Pre-fragmentation failures:1
        Post-fragmentation failures: 1
    Fragments created: 10
    PMTUs sent: 1
    PMTUs recvd: 2
Protocol failures: 0
Missing SA failures: 0
System capacity failures: 0
hostname(config)#
```

Related Commands

Command	Description
clear ipsec sa	Clears IPSec SAs or counters based on specified parameters.
crypto ipsec transform-set	Defines a transform set.
show ipsec sa	Displays IPSec SAs based on specified parameters.
show ipsec sa summary	Displays a summary of IPSec SAs.

show crypto isakmp stats

To display runtime statistics, use the **show crypto isakmp stats** command in global configuration mode or privileged EXEC mode.

show crypto isakmp stats

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	—	•	—	—
Privileged EXEC	•	—	•	—	—

Command History

Release	Modification
7.0(1)	The **show isakmp stats** command was introduced.
7.2(1)	The **show isakmp stats** command was deprecated. The **show crypto isakmp stats** command replaces it.

Usage Guidelines

The output from this command includes the following fields:

- Global IKE Statistics
- Active Tunnels
- In Octets
- In Packets
- In Drop Packets
- In Notifys
- In P2 Exchanges
- In P2 Exchange Invalids
- In P2 Exchange Rejects
- In P2 Sa Delete Requests
- Out Octets
- Out Packets

- Out Drop Packets
- Out Notifys
- Out P2 Exchanges
- Out P2 Exchange Invalids
- Out P2 Exchange Rejects
- Out P2 Sa Delete Requests
- Initiator Tunnels
- Initiator Fails
- Responder Fails
- System Capacity Fails
- Auth Fails
- Decrypt Fails
- Hash Valid Fails
- No Sa Fails

Examples

The following example, issued in global configuration mode, displays ISAKMP statistics:

```
hostname(config)# show crypto isakmp stats
Global IKE Statistics
Active Tunnels: 132
Previous Tunnels: 132
In Octets: 195471
In Packets: 1854
In Drop Packets: 925
In Notifys: 0
In P2 Exchanges: 132
In P2 Exchange Invalids: 0
In P2 Exchange Rejects: 0
In P2 Sa Delete Requests: 0
Out Octets: 119029
Out Packets: 796
Out Drop Packets: 0
Out Notifys: 264
Out P2 Exchanges: 0
Out P2 Exchange Invalids: 0
Out P2 Exchange Rejects: 0
Out P2 Sa Delete Requests: 0
Initiator Tunnels: 0
Initiator Fails: 0
Responder Fails: 0
System Capacity Fails: 0
Auth Fails: 0
Decrypt Fails: 0
Hash Valid Fails: 0
No Sa Fails: 0
hostname(config)#
```

Related Commands

Command	Description
clear configure crypto isakmp	Clears all the ISAKMP configuration.
clear configure crypto isakmp policy	Clears all ISAKMP policy configuration.
clear crypto isakmp sa	Clears the IKE runtime SA database.
crypto isakmp enable	Enables ISAKMP negotiation on the interface on which the IPSec peer communicates with the security appliance.
show running-config crypto isakmp	Displays all the active ISAKMP configuration.

show crypto isakmp sa

To display the IKE runtime SA database, use the **show crypto isakmp sa** command in global configuration mode or privileged EXEC mode.

show crypto isakmp sa [**detail**]

Syntax Description

detail	Displays detailed output about the SA database.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
Global configuration	•	—	•	—	—
Privileged EXEC	•	—	•	—	—

Command History

Release	Modification
7.0(1)	The **show isakmp sa** command was introduced.
7.2(1)	This command was deprecated. The **show crypto isakmp sa** command replaces it.

Usage Guidelines

The output from this command includes the following fields:

Detail not specified.

IKE Peer	Type	Dir	Rky	State
209.165.200.225	L2L	Init	No	MM_Active

Detail specified.

IKE Peer	Type	Dir	Rky	State	Encrypt	Hash	Auth	Lifetime
209.165.200.225	L2L	Init	No	MM_Active	3des	md5	preshrd	86400

Examples

The following example, entered in global configuration mode, displays detailed information about the SA database:

```
hostname(config)# show crypto isakmp sa detail

IKE Peer  Type  Dir   Rky  State      Encrypt Hash  Auth    Lifetime
1 209.165.200.225 User  Resp  No   AM_Active  3des    SHA   preshrd 86400

IKE Peer  Type  Dir   Rky  State      Encrypt Hash  Auth    Lifetime
2 209.165.200.226 User  Resp  No   AM_ACTIVE  3des    SHA   preshrd 86400

IKE Peer  Type  Dir   Rky  State      Encrypt Hash  Auth    Lifetime
3 209.165.200.227 User  Resp  No   AM_ACTIVE  3des    SHA   preshrd 86400

IKE Peer  Type  Dir   Rky  State      Encrypt Hash  Auth    Lifetime
4 209.165.200.228 User  Resp  No   AM_ACTIVE  3des    SHA   preshrd 86400

hostname(config)#
```

Related Commands

Command	Description
clear configure crypto isakmp	Clears all the ISAKMP configuration.
clear configure crypto isakmp policy	Clears all ISAKMP policy configuration.
clear crypto isakmp sa	Clears the IKE runtime SA database.
crypto isakmp enable	Enables ISAKMP negotiation on the interface on which the IPSec peer communicates with the security appliance.
show running-config crypto isakmp	Displays all the active ISAKMP configuration.

show crypto isakmp stats

To display runtime statistics, use the **show crypto isakmp stats** command in global configuration mode or privileged EXEC mode.

show crypto isakmp stats

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	—	•	—	—
Privileged EXEC	•	—	•	—	—

Command History

Release	Modification
7.0(1)	The **show isakmp stats** command was introduced.
7.2(1)	The **show isakmp stats** command was deprecated. The **show crypto isakmp stats** command replaces it.

Usage Guidelines

The output from this command includes the following fields:

- Global IKE Statistics
- Active Tunnels
- In Octets
- In Packets
- In Drop Packets
- In Notifys
- In P2 Exchanges
- In P2 Exchange Invalids
- In P2 Exchange Rejects
- In P2 Sa Delete Requests
- Out Octets
- Out Packets

- Out Drop Packets
- Out Notifys
- Out P2 Exchanges
- Out P2 Exchange Invalids
- Out P2 Exchange Rejects
- Out P2 Sa Delete Requests
- Initiator Tunnels
- Initiator Fails
- Responder Fails
- System Capacity Fails
- Auth Fails
- Decrypt Fails
- Hash Valid Fails
- No Sa Fails

Examples

The following example, issued in global configuration mode, displays ISAKMP statistics:

```
hostname(config)# show crypto isakmp stats
Global IKE Statistics
Active Tunnels: 132
Previous Tunnels: 132
In Octets: 195471
In Packets: 1854
In Drop Packets: 925
In Notifys: 0
In P2 Exchanges: 132
In P2 Exchange Invalids: 0
In P2 Exchange Rejects: 0
In P2 Sa Delete Requests: 0
Out Octets: 119029
Out Packets: 796
Out Drop Packets: 0
Out Notifys: 264
Out P2 Exchanges: 0
Out P2 Exchange Invalids: 0
Out P2 Exchange Rejects: 0
Out P2 Sa Delete Requests: 0
Initiator Tunnels: 0
Initiator Fails: 0
Responder Fails: 0
System Capacity Fails: 0
Auth Fails: 0
Decrypt Fails: 0
Hash Valid Fails: 0
No Sa Fails: 0
hostname(config)#
```

Related Commands

Command	Description
clear configure crypto isakmp	Clears all the ISAKMP configuration.
clear configure crypto isakmp policy	Clears all ISAKMP policy configuration.
clear crypto isakmp sa	Clears the IKE runtime SA database.
crypto isakmp enable	Enables ISAKMP negotiation on the interface on which the IPSec peer communicates with the security appliance.
show running-config crypto isakmp	Displays all the active ISAKMP configuration.

show crypto protocol statistics

To display the protocol-specific statistics in the crypto accelerator MIB, use the **show crypto protocol statistics** command in global configuration or privileged EXEC mode.

show crypto protocol statistics *protocol*

Syntax Description

protocol	Specifies the name of the protocol for which to display statistics. Protocol choices are as follows: **ikev1**—Internet Key Exchange version 1. **ipsec**—IP Security Phase-2 protocols. **ssl**—Secure Socket Layer. **other**—Reserved for new protocols. **all**—All protocols currently supported.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	•	•	—	—
Privileged EXEC	•	•	•	—	—

Command History

Release	Modification
7.0(1)	This command was introduced.

Examples

The following examples entered in global configuration mode, display crypto accelerator statistics for specified protocols:

```
hostname # show crypto protocol statistics ikev1
[IKEv1 statistics]
   Encrypt packet requests: 39
   Encapsulate packet requests: 39
   Decrypt packet requests: 35
   Decapsulate packet requests: 35
   HMAC calculation requests: 84
   SA creation requests: 1
   SA rekey requests: 3
    SA deletion requests: 2
```

```
   Next phase key allocation requests: 2
   Random number generation requests: 0
    Failed requests: 0

hostname # show crypto protocol statistics ipsec
[IPsec statistics]
   Encrypt packet requests: 700
   Encapsulate packet requests: 700
   Decrypt packet requests: 700
   Decapsulate packet requests: 700
   HMAC calculation requests: 1400
   SA creation requests: 2
   SA rekey requests: 0
   SA deletion requests: 0
   Next phase key allocation requests: 0
   Random number generation requests: 0
   Failed requests: 0

hostname # show crypto protocol statistics ssl
[SSL statistics]
   Encrypt packet requests: 0
   Encapsulate packet requests: 0
   Decrypt packet requests: 0
   Decapsulate packet requests: 0
   HMAC calculation requests: 0
   SA creation requests: 0
   SA rekey requests: 0
   SA deletion requests: 0
   Next phase key allocation requests: 0
   Random number generation requests: 0
   Failed requests: 0

hostname # show crypto protocol statistics other
[Other statistics]
   Encrypt packet requests: 0
   Encapsulate packet requests: 0
   Decrypt packet requests: 0
   Decapsulate packet requests: 0
   HMAC calculation requests: 0
   SA creation requests: 0
   SA rekey requests: 0
   SA deletion requests: 0
   Next phase key allocation requests: 0
   Random number generation requests: 99
   Failed requests: 0

hostname # show crypto protocol statistics all
[IKEv1 statistics]
   Encrypt packet requests: 46
   Encapsulate packet requests: 46
   Decrypt packet requests: 40
   Decapsulate packet requests: 40
   HMAC calculation requests: 91
    SA creation requests: 1
   SA rekey requests: 3
   SA deletion requests: 3
   Next phase key allocation requests: 2
   Random number generation requests: 0
   Failed requests: 0
[IKEv2 statistics]
   Encrypt packet requests: 0
   Encapsulate packet requests: 0
    Decrypt packet requests: 0
   Decapsulate packet requests: 0
```

```
   HMAC calculation requests: 0
   SA creation requests: 0
   SA rekey requests: 0
   SA deletion requests: 0
   Next phase key allocation requests: 0
   Random number generation requests: 0
   Failed requests: 0
[IPsec statistics]
   Encrypt packet requests: 700
   Encapsulate packet requests: 700
    Decrypt packet requests: 700
   Decapsulate packet requests: 700
   HMAC calculation requests: 1400
   SA creation requests: 2
   SA rekey requests: 0
   SA deletion requests: 0
   Next phase key allocation requests: 0
   Random number generation requests: 0
   Failed requests: 0
[SSL statistics]
   Encrypt packet requests: 0
   Encapsulate packet requests: 0
   Decrypt packet requests: 0
   Decapsulate packet requests: 0
   HMAC calculation requests: 0
   SA creation requests: 0
   SA rekey requests: 0
   SA deletion requests: 0
   Next phase key allocation requests: 0
   Random number generation requests: 0
   Failed requests: 0
[SSH statistics are not supported]
[SRTP statistics are not supported]
[Other statistics]
   Encrypt packet requests: 0
   Encapsulate packet requests: 0
   Decrypt packet requests: 0
   Decapsulate packet requests: 0
    HMAC calculation requests: 0
   SA creation requests: 0
   SA rekey requests: 0
   SA deletion requests: 0
   Next phase key allocation requests: 0
   Random number generation requests: 99
   Failed requests: 0
hostname #
```

Related Commands

Command	Description
clear crypto accelerator statistics	Clears the global and accelerator-specific statistics in the crypto accelerator MIB.
clear crypto protocol statistics	Clears the protocol-specific statistics in the crypto accelerator MIB.
show crypto accelerator statistics	Displays the global and accelerator-specific statistics from the crypto accelerator MIB.

show csc node-count

A node is any distinct source IP address or the address of a device that is on a network protected by the security appliance. The security appliance keeps track of a daily node count and communicates this to the CSC SSM for user license enforcement. To display the number of nodes for which the CSC SSM scanned traffic, use the **show csc node-count** command in privileged EXEC mode:

show csc node-count [**yesterday**]

Syntax Description

yesterday	(Optional) Shows the number of nodes for which the CSC SSM scanned traffic in the preceding 24-hour period, from midnight to midnight.

Defaults

By default, the node count displayed is the number of nodes scanned since midnight.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	**Routed**	**Transparent**	**Single**	**Context**	**System**
Privileged EXEC	•	•	•	—	•

Command History

Release	Modification
Preexisting	This command was preexisting.

Examples

This example shows the use of the **show csc node-count** command to display the number of nodes for which the CSC SSM has scanned traffic since midnight:

```
hostname# show csc node-count
Current node count is 1
```

This example shows the use of the **show csc node-count** command to display the number of nodes for which the CSC SSM scanned traffic in the preceding 24-hour period, from midnight to midnight:

```
hostname(config)# show csc node-count yesterday
Yesterday's node count is 2
```

Related Commands

csc	Sends network traffic to the CSC SSM for scanning of FTP, HTTP, POP3, and SMTP, as configured on the CSC SSM.
show running-config class-map	Show current class map configuration.

show running-config policy-map	Show current policy map configuration.
show running-config service-policy	Show current service policy configuration.

show ctiqbe

To display information about CTIQBE sessions established across the security appliance, use the **show ctiqbe** command in privileged EXEC mode.

show ctiqbe

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Privileged EXEC	•	•	•	•	•

Command History

Release	Modification
Preexisting	This command was preexisting.

Usage Guidelines

The **show ctiqbe** command displays information of CTIQBE sessions established across the security appliance. Along with **debug ctiqbe** and **show local-host**, this command is used for troubleshooting CTIQBE inspection engine issues.

Note We recommend that you have the **pager** command configured before using the **show ctiqbe** command. If there are a lot of CTIQBE sessions and the **pager** command is not configured, it can take a while for the **show ctiqbe** command output to reach the end.

Examples

The following is sample output from the **show ctiqbe** command under the following conditions. There is only one active CTIQBE session setup across the security appliance. It is established between an internal CTI device (for example, a Cisco IP SoftPhone) at local address 10.0.0.99 and an external Cisco Call Manager at 172.29.1.77, where TCP port 2748 is the Cisco CallManager. The heartbeat interval for the session is 120 seconds.

```
hostname# show ctiqbe

Total: 1
  LOCAL  FOREIGN  STATE  HEARTBEAT
-----------------------------------------------------------------
1  10.0.0.99/1117   172.29.1.77/2748  1  120
  RTP/RTCP: PAT xlates: mapped to 172.29.1.99(1028  1029)
```

```
|MEDIA: Device ID 27|Call ID 0
|Foreign 172.29.1.99|(1028|1029)
|Local|172.29.1.88|(26822|26823)
|-------------------------------------------
```

The CTI device has already registered with the CallManager. The device internal address and RTP listening port is PATed to 172.29.1.99 UDP port 1028. Its RTCP listening port is PATed to UDP 1029.

The line beginning with `RTP/RTCP: PAT xlates:` appears only if an internal CTI device has registered with an external CallManager and the CTI device address and ports are PATed to that external interface. This line does not appear if the CallManager is located on an internal interface, or if the internal CTI device address and ports are NATed to the same external interface that is used by the CallManager.

The output indicates a call has been established between this CTI device and another phone at 172.29.1.88. The RTP and RTCP listening ports of the other phone are UDP 26822 and 26823. The other phone locates on the same interface as the CallManager because the security appliance does not maintain a CTIQBE session record associated with the second phone and CallManager. The active call leg on the CTI device side can be identified with Device ID 27 and Call ID 0.

The following is the xlate information for these CTIBQE connections:

```
hostname# show xlate debug
3 in use, 3 most used
Flags: D|DNS, d|dump, I|identity, i|inside, n|no random,
|o|outside, r|portmap, s|static
TCP PAT from inside:10.0.0.99/1117 to outside:172.29.1.99/1025 flags ri idle 0:00:22
timeout 0:00:30
UDP PAT from inside:10.0.0.99/16908 to outside:172.29.1.99/1028 flags ri idle 0:00:00
timeout 0:04:10
UDP PAT from inside:10.0.0.99/16909 to outside:172.29.1.99/1029 flags ri idle 0:00:23
timeout 0:04:10
hostname#
```

Related Commands

Commands	Description
class-map	Defines the traffic class to which to apply security actions.
inspect ctiqbe	Enables CTIQBE application inspection.
service-policy	Applies a policy map to one or more interfaces.
show conn	Displays the connection state for different connection types.
timeout	Sets the maximum idle time duration for different protocols and session types.

show curpriv

To display the current user privileges, use the **show curpriv** command:

show curpriv

Syntax Description

This command has no arguments or keywords.

Defaults

No default behaviors or values.

Command Modes

The following table shows the modes in which you can enter the command:

	Firewall Mode		Security Context		
				Multiple	
Command Mode	Routed	Transparent	Single	Context	System
Global configuration	•	•	—	—	•
Privileged EXEC	•	•	—	—	•
User EXEC	•	•	—	—	•

Command History

Release	Modification
7.0(1)	Modified to conform to CLI guidelines.

Usage Guidelines

The show curpriv command displays the current privilege level. Lower privilege level numbers indicate lower privilege levels.

Examples

These examples show output from the **show curpriv** command when a user named enable_15 is at different privilege levels. The username indicates the name that the user entered when the user logged in, P_PRIV indicates that the user has entered the **enable** command, and P_CONF indicates that the user has entered the **config terminal** command.

```
hostname(config)# show curpriv
Username : enable_15
Current privilege level : 15
Current Mode/s : P_PRIV P_CONF
hostname(config)# exit

hostname(config)# show curpriv
Username : enable_15
Current privilege level : 15
Current Mode/s : P_PRIV
hostname(config)# exit
```

```
hostname(config)# show curpriv
Username : enable_1
Current privilege level : 1
Current Mode/s : P_UNPR
hostname(config)#
```

The following is a known behavior. When you are in enable mode then enter disable mode the initial logged in username is replaced with enable_1 as shown in the example below:

```
hostname(config)# show curpriv
Username : enable_15
Current privilege level : 15
Current Mode/s : P_PRIV P_CONF
asa2(config)# disable
asa2> show curpriv
Username : enable_1
Current privilege level : 1
Current Mode/s : P_UNPR
```

Related Commands

Command	Description
clear configure privilege	Remove privilege command statements from the configuration.
show running-config privilege	Display privilege levels for commands.