



## **Cisco ASR 5000 Series Personal Stateful Firewall Administration Guide - Errata**

**Release 11.0 and 12.0**

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# About this Guide

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This document pertains to the features and functionality that run on and/or that are related to the Cisco® ASR 5x00 Chassis.

This preface includes the following sections:

- [Conventions Used](#)
- [Contacting Customer Support](#)
- [Additional Information](#)

## Conventions Used

The following tables describe the conventions used throughout this documentation.

Icon	Notice Type	Description
	Information Note	Provides information about important features or instructions.
	Caution	Alerts you of potential damage to a program, device, or system.
	Warning	Alerts you of potential personal injury or fatality. May also alert you of potential electrical hazards.
	Electrostatic Discharge (ESD)	Warns you to take proper grounding precautions before handling ESD sensitive components or devices.

Typeface Conventions	Description
Text represented as a <i>screen display</i>	This typeface represents text that appears on your terminal screen, for example: Login:
Text represented as <b>commands</b>	This typeface represents commands that you enter at the CLI, for example: <b>show ip access-list</b> This document always gives the full form of a command in lowercase letters. Commands are <u>not</u> case sensitive.
Text represented as a <b>command variable</b>	This typeface represents a variable that is part of a command, for example: <b>show card slot_number</b> <i>slot_number</i> is a variable representing the desired chassis slot number.
Text represented as menu or sub-menu names	This typeface represents menus and sub-menus that you access within a software application, for example: Click the <b>File</b> menu, then click <b>New</b> .

Command Syntax Conventions	Description
{ <b>keyword</b> or <i>variable</i> }	Required keywords and variables are surrounded by braces. They must be entered as part of the command syntax.
[ <b>keyword</b> or <i>variable</i> ]	Optional keywords or variables that may or may not be used are surrounded by brackets.

Command Syntax Conventions	Description
	<p>Some commands support alternative variables. These “options” are documented within braces or brackets by separating each variable with a vertical bar.</p> <p>These variables can be used in conjunction with required or optional keywords or variables. For example:</p> <pre>{ <b>nonce</b>   <b>timestamp</b> }</pre> <p>OR</p> <pre>[ <b>count</b> <i>number_of_packets</i>   <b>size</b> <i>number_of_bytes</i> ]</pre>

## Contacting Customer Support

Go to <http://www.cisco.com/cisco/web/support/> to submit a service request. A valid Cisco account (username and password) is required to access this site. Please contact your Cisco account representative for additional information.

## Additional Information

Refer to the following guides for supplemental information about the system:

- *Command Line Interface Reference*
- *Statistics and Counters Reference*
- *Thresholding Configuration Guide*
- *SNMP MIB Reference*
- *Cisco Web Element Manager Installation and Administration Guide*
- Product-specific and feature-specific administration guides
- *Release Notes* that accompany updates and upgrades to StarOS



# Chapter 1

## Affected Document(s)

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This errata provides corrections to any documentation errors in the *Personal Stateful Firewall Administration Guide* specific to Release 11.0 and 12.0 on the Cisco ASR 5000.

Documentation corrections provided in this errata pertain to the documents listed in the following table and correspond to the stated release dates:

Document	Part Number	Release Date
<i>Cisco ASR 5000 Personal Stateful Firewall Administration Guide: Version 11.0</i>	OL-24220-01	January 14, 2011
<i>Cisco ASR 5000 Personal Stateful Firewall Administration Guide: Version 12.0</i>	OL-24894-01	April 30, 2011



# Chapter 2

## Sample Personal Stateful Firewall Configuration

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In the *Sample Personal Stateful Firewall Configuration* chapter of the affected books, the “`tcp packets-out-of-order timeout`” and “`tcp packets-out-of-order transmit after-reordering`” commands are not applicable to Stateful Firewall functionality. The commands are specific to Active Charging Service functionality. The following is the correct sample configuration.

```
configure

  license key "\

VER=1|C1M=SanDiskSDJNJKL742749406|C1S=14J3KJI20|DOI=108|DOE=12\

SIG=MC4CFQCf9f7bAibGKJWqMd5XowxVwIVALIVgTVDsVAAogKe7fUHAEUTokw"

  aaa default-domain subscriber radius

  aaa last-resort context subscriber radius

  gtp single-source

  system hostname ABCCH4

  autoconfirm

  clock timezone asia-calcutta

  crash enable encrypted url 123abc456def789ghi

  card 1

    mode active psc

    exit

  card 2

    mode active psc

    exit

  card 4

    mode active psc

    exit

  require session recovery
```

## ■ Additional Information

```
require active-charging
context local
    interface SPIO1
        ip address 1.2.3.4 255.255.255.0
        exit
    server ftpd
        exit
    ssh key 123abc456def789ghi123abc456def789ghi len 461
    server sshd
        subsystem sftp
        exit
    server telnetd
        exit
    subscriber default
        exit
    administrator staradmin encrypted password 123abc456def789ghi ftp
    aaa group default
        exit
    gtp group default
        exit
    ip route 0.0.0.0 0.0.0.0 2.3.4.5 SPIO1
    exit
port ethernet 24/1
    no shutdown
    bind interface SPIO1 local
    exit
ntp
    enable
    server 10.6.1.1
```

```
exit
snmp engine-id local 77777e66666a55555
active-charging service service_1
nat allocation-failure send-icmp-dest-unreachable
host-pool host1
    ip range 1.2.3.4 to 2.3.4.5
    exit
host-pool host2
    ip range 3.4.5.6 to 4.5.6.7
    exit
host-pool host3
    ip range 5.6.7.8 to 6.7.8.9
    exit
ruledef ip_any
    ip any-match = TRUE
    exit
ruledef rt_ftp
    tcp dst-port = 21
    rule-application routing
    exit
ruledef rt_ftp_data
    tcp dst-port = 20
    rule-application routing
    exit
ruledef rt_rtsp
    tcp dst-port = 554
    rule-application routing
    exit
ruledef rt_http
```

```
    tcp dst-port = 80
    rule-application routing
exit
ruledef rt_pptp
    tcp dst-port = 1723
    rule-application routing
exit
ruledef rt_tftp
    udp dst-port = 69
    rule-application routing
exit
access-ruledef fw_icmp
    icmp any-match = TRUE
    exit
access-ruledef fw_tcp
    tcp any-match = TRUE
    exit
access-ruledef fw_udp
    udp any-match = TRUE
    exit
edr-format nbr_format1
    attribute sn-start-time format MM/DD/YYYY-HH:MM:SS priority 5
    attribute sn-end-time format MM/DD/YYYY-HH:MM:SS priority 10
    attribute radius-nas-ip-address priority 15
    attribute sn-correlation-id priority 20
    rule-variable ip subscriber-ip-address priority 25
    rule-variable ip server-ip-address priority 30
    attribute sn-subscriber-port priority 35
    attribute sn-server-port priority 40
```

```
attribute sn-flow-id priority 45
attribute sn-volume-amt ip bytes uplink priority 50
attribute sn-volume-amt ip bytes downlink priority 55
attribute sn-volume-amt ip pkts uplink priority 60
attribute sn-volume-amt ip pkts downlink priority 65
attribute sn-volume-amt tcp pkts downlink priority 66
attribute sn-volume-amt tcp pkts uplink priority 67
attribute sn-volume-amt tcp bytes downlink priority 68
attribute sn-volume-amt tcp bytes uplink priority 69
rule-variable ip protocol priority 70
attribute sn-app-protocol priority 75
attribute radius-user-name priority 80
attribute radius-calling-station-id priority 85
attribute sn-direction priority 90
attribute sn-volume-dropped-amt ip bytes uplink priority 100
attribute sn-volume-dropped-amt ip bytes downlink priority 110
attribute sn-volume-dropped-amt ip packets uplink priority 115
attribute sn-volume-dropped-amt ip packets downlink priority 120
attribute sn-volume-dropped-amt tcp bytes uplink priority 130
attribute sn-volume-dropped-amt tcp bytes downlink priority 140
attribute sn-volume-dropped-amt tcp packets uplink priority 155
attribute sn-volume-dropped-amt tcp packets downlink priority 160
exit

udr-format udr_format
attribute sn-start-time format MM/DD/YYYY-HH:MM:SS localtime priority 1
attribute sn-end-time format MM/DD/YYYY-HH:MM:SS localtime priority 2
attribute sn-correlation-id priority 4
attribute sn-content-vol bytes uplink priority 6
attribute sn-content-vol bytes downlink priority 7
```

```
attribute sn-fa-correlation-id priority 8
attribute radius-fa-nas-ip-address priority 9
attribute radius-fa-nas-identifier priority 10
attribute radius-user-name priority 11
attribute sn-content-vol pkts uplink priority 12
attribute sn-content-vol pkts downlink priority 13
attribute sn-group-id priority 14
attribute sn-content-id priority 15

exit

xheader-format header

insert Stpid-1 variable bearer sn-rulebase
insert Stpid-2 variable bearer subscriber-ip-address

exit

charging-action ca_nothing

content-id 20

exit

bandwidth-policy bw1

exit

bandwidth-policy bw2

exit

rulebase base_1

route priority 1 ruledef rt_ftp analyzer ftp-control
route priority 10 ruledef rt_ftp_data analyzer ftp-data
route priority 20 ruledef rt_rtsp analyzer rtsp
route priority 40 ruledef rt_http analyzer http
route priority 50 ruledef rt_pptp analyzer pptp
route priority 60 ruledef rt_tftp analyzer tftp

rtp dynamic-flow-detection

fw-and-nat default-policy base_1
```

```
exit

rulebase base_2

  action priority 1 ruledef ip_any charging-action ca_nothing

  route priority 1 ruledef rt_ftp analyzer ftp-control

  route priority 10 ruledef rt_ftp_data analyzer ftp-data

  route priority 40 ruledef rt_http analyzer http

  route priority 50 ruledef rt_pptp analyzer pptp

  route priority 60 ruledef rt_tftp analyzer tftp

  bandwidth default-policy bw2

  fw-and-nat default-policy base_2

  exit

rulebase default

  exit

fw-and-nat policy base_1

  access-rule priority 1 access-ruledef fw_tcp permit

  access-rule priority 2 access-ruledef fw_udp permit

  firewall dos-protection source-router

  firewall dos-protection winnuke

  firewall dos-protection mime-flood

  firewall dos-protection ftp-bounce

  firewall dos-protection ip-unaligned-timestamp

  firewall dos-protection tcp-window-containment

  firewall dos-protection teardrop

  firewall dos-protection flooding udp

  firewall dos-protection flooding icmp

  firewall dos-protection flooding tcp-syn

  firewall dos-protection port-scan

  firewall dos-protection ipv6-dst-options invalid-options

  firewall dos-protection ipv6-extension-hdrs limit 2
```

## ■ Additional Information

```
firewall dos-protection ipv6-hop-by-hop jumbo-payload
firewall dos-protection ipv6-hop-by-hop router-alert
firewall tcp-first-packet-non-syn reset
firewall policy ipv4-and-ipv6
exit

fw-and-nat policy base_2

access-rule priority 5 access-ruledef fw_tcp_port_3000 permit trigger open-port
5000 direction reverse

access-rule priority 10 access-ruledef fw_tcp permit
access-rule priority 20 access-ruledef fw_udp permit
access-rule priority 30 access-ruledef fw_icmp deny
firewall policy ipv4-and-ipv6
exit

nat tcp-2msl-timeout 120
exit

context pdsn

interface pdsn

ip address 11.22.33.44 255.255.255.0
ip address 22.33.44.55 255.255.255.0 secondary
exit

ssh key 123abc456def789ghi123abc456def789ghi len 461

server sshd

subsystem sftp
exit

subscriber default

ip access-group css-1 in
ip access-group css-1 out

ip context-name isp

mobile-ip send accounting-correlation-info
```

```
    active-charging rulebase base_1
  exit

aaa group default
  exit

gtpv group default
  exit

pdsn-service pdsn

  spi remote-address 1.1.1.1 spi-number 256 encrypted secret 5c4a38dc2ff61f72
timestamp-tolerance 0

  spi remote-address 2.2.2.2 spi-number 256 encrypted secret 5c4a38dc2ff61f72
timestamp-tolerance 0

  spi remote-address 3.3.3.3 spi-number 9999 encrypted secret 5c4a38dc2ff61f72
timestamp-tolerance 0

  authentication pap 1 chap 2 allow-noauth

  bind address 4.4.4.4

  exit

edr-module active-charging-service

  file name NBR_nat current-prefix Record rotation time 45 headers edr-format-name

  exit

exit

context isp

  ip access-list css

    redirect css service service_1 ip any any

    exit

  ip pool pool1 5.5.5.5 255.255.0.0 public 0

  interface isp

    ip address 6.6.6.6 255.255.255.0

    exit

  subscriber default

  exit
```

## ■ Additional Information

```
aaa group default
    exit

gtpm group default
    exit

ip route 0.0.0.0 0.0.0.0 7.7.7.7 isp

exit

context radius

interface radius
    ip address 8.8.8.8 255.255.255.0
    exit

subscriber default
    exit

subscriber name ABC7-sub
    ip access-group css in
    ip access-group css out
    ip context-name isp
    active-charging rulebase base_1
    exit

subscriber name ABC9-sub
    ip access-group css in
    ip access-group css out
    ip context-name isp1
    active-charging rulebase base_2
    exit

domain ABC7.com default subscriber ABC7-sub

domain ABC9.com default subscriber ABC9-sub

radius change-authorize-nas-ip 77.77.77.77 encrypted key 123abc456def789ghi port
4000

aaa group default
```

```

radius attribute nas-ip-address address 99.99.99.99

radius dictionary custom9

radius server 9.9.9.9 encrypted key 123abc456def789gh port 1645

radius accounting server 8.8.8.8 encrypted key 123abc port 1646

exit

gtpv group default

exit

diameter endpoint acs-fire.star.com

origin host acs-fire.star.com address 44.44.44.44

peer minid realm star.com address 55.55.55.55

exit

exit

bulkstats collection

bulkstats mode

sample-interval 1

transfer-interval 15

file 1

remotefile format /localdisk/ABCCH4.bulkstat

receiver 66.66.66.66 primary mechanism ftp login root encrypted password
123abc456def789ghi

context schema sfw-dir format "sfw-dir\nsfw-dnlk-droppkts:%sfw-dnlk-
droppkts%\nsfw-dnlk-dropbytes:%sfw-dnlk-dropbytes%\nsfw-uplnk-droppkts:%sfw-uplnk-
droppkts%\nsfw-uplnk-dropbytes:%sfw-uplnk-dropbytes%\nsfw-ip-discardpackets:%sfw-ip-
discardpackets%\nsfw-ip-malpackets:%sfw-ip-malpackets%\nsfw-icmp-discardpackets:%sfw-
icmp-discardpackets%\nsfw-icmp-malpackets:%sfw-icmp-malpackets%\nsfw-tcp-
discardpackets:%sfw-tcp-discardpackets%\nsfw-tcp-malpackets:%sfw-tcp-malpackets%\nsfw-
udp-discardpackets:%sfw-udp-discardpackets%\nsfw-udp-malpackets:%sfw-udp-malpackets%\n---
-----\n"

context schema sfw-total format "sfw-
total\nvpname:%vpname%\nvpnid:%vpnid%\nsfw-total-rxpackets:%sfw-total-rxpackets%\nsfw-
total-rxbytes:%sfw-total-rxbytes%\nsfw-total-txpackets:%sfw-total-txpackets%\nsfw-total-
txbytes:%sfw-total-txbytes%\nsfw-total-injectedpkts:%sfw-total-injectedpkts%\nsfw-total-
injectedbytes:%sfw-total-injectedbytes%\nsfw-total-malpackets:%sfw-total-malpackets%\nsfw-
total-dosattacks:%sfw-total-dosattacks%\nsfw-total-flows:%sfw-total-flows%\n-----
-----\n"

```

## ■ Additional Information

```
        exit
    exit
port ethernet 17/1
    no shutdown
    bind interface pdsn pdsn
    exit
port ethernet 17/2
    no shutdown
    bind interface isp isp
    exit
port ethernet 17/3
    no shutdown
    bind interface radius radius
    exit
port ethernet 17/4
    no shutdown
    exit
port ethernet 17/5
    no shutdown
    exit
end
```