

# Fail2Ban

Fail2Ban

????????????????????????????????Python????????????????Unix????????????????????  
?????????????Iptables?TCP Wrapper?

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# Install Fail2Ban on Debian

## Installation

Download: <https://www.fail2ban.org/wiki/index.php/Downloads>

```
# Debian 7.x
tar xzf 0.9.2.tar.gz
cd fail2ban-0.9.2/
python setup.py install
```

## Verify

```
fail2ban-client -h
```

## Configuration for Asterisk

On Asterisk)

/etc/asterisk/logger.conf:

```
...
[logfiles]
...
fail2ban => notice,warning,security
```

Restart the logger on Asterisk

```
asterisk -rx "logger reload"
asterisk -rx "logger show channels"
```

On Fail2Ban)

/etc/fail2ban/jail.d/asterisk.conf

```
[asterisk]
enabled = true
logpath = /var/log/asterisk/fail2ban
```

```
maxretry = 5
bantime = 259200
```

## Configuration for SSH

/etc/fail2ban/jail.d/sshd.conf

```
[sshd]
enabled = true
bantime = 7200
findtime = 900
maxretry = 4
```

## Auto startup

```
cd fail2ban-0.9.2/
cp files/debian-initd /etc/init.d/fail2ban
chmod 0755 /etc/init.d/fail2ban
update-rc.d fail2ban defaults
```

## Service start

```
service fail2ban start
```

## Setup Logrotate

/etc/logrotate.d/fail2ban

```
/var/log/fail2ban.log {
    missingok
    notifempty
    size 30k
    create 0600 root root
    postrotate
        /usr/bin/fail2ban-client set logtarget /var/log/fail2ban.log 1>/dev/null || true
        /usr/bin/fail2ban-client reload 2> /dev/null || true
    endscript
}
```

## FAQ

Q:?? Call Log ??????

““ Call from " (195.154.134.116:5071) to extension '8011441295298642' rejected because extension not found in context 'public'.

Ans??? Asterisk ? allowguest=no

?? sip.conf

```
allowguest=no
```

Apply the changes

```
#> asterisk -rx "sip reload"
#> asterisk -rx "sip show settings" | grep -i "Allow unknown access"
Allow unknown access: No
```

# Learning Fail2Ban

[Fail2ban](#) ??? Python ????? GPLv2 ?????????????????????? (filter) ???  
(action)?? (???? IP???????????????? IP  
???)??

- ?? SSH?FTP ??????????
- ?????????????????
- ????????????????? ( ? apache?bind?postfix?vsftpd?proftpd...)?

???? SSH  
??  
????????????????????

GitHub: <https://github.com/fail2ban/fail2ban>

## Configuration

- [Configure fail2ban to use route instead of iptables to block connections](#)

# Fail2Ban FAQ

Q:??????????

“ WARNING Determined IP using DNS Lookup:

Ans: ?? /etc/fail2ban/jail.conf

usedns = no

Q:[v0.10.0] ????????

“ iptables v1.4.14: unknown option "-w"

Ans????? iptables ????? v1.4.20 ??????????????????????

?? /etc/fail2ban/action.d/iptables-common.local

[Init]

lockingopt =

Q:[Asterisk] ?? Call Log ??????

“ Call from " (195.154.134.116:5071) to extension '8011441295298642'  
rejected because extension not found in context 'public'.

Ans??? Asterisk ? allowguest=no

?? sip.conf

allowguest=no

?????

```
#> asterisk -rx "sip reload"
#> asterisk -rx "sip show settings" | grep -i "Allow unknown access"
Allow unknown access: No
```

Q:[Asterisk] ??????????

Ans: ????? log ??????????????????????

????? log ???

```
[2015-01-28 05:40:16] NOTICE[-1] Ext. 9015448702956577: Incoming SIP connection from unknown peer failed
for 31.3.244.234 - Unknown connection from peer
```

? /etc/fail2ban/filter.d/asterisk.conf ???????

```
NOTICE.*.*: Incoming SIP connection from unknown peer failed for <HOST> - Unknown connection from peer
```

????????????????????

```
fail2ban-regex /var/log/asterisk/fail2ban "NOTICE.*.*: Incoming SIP connection from unknown peer failed for
<HOST> - Unknown connection from peer"
```

“ Tips: fail2ban-regex <path/to/log> <failregex or  
/etc/fail2ban/filter.s/XXX.conf>

Q:???? /var/log/fail2ban.log

Ans: ?? /etc/fail2ban/fail2ban.conf

```
#logtarget = SYSLOG
logtarget = /var/log/fail2ban.log
```

?? fail2ban ??

Q:[Asterisk] ? Elastix/CentOS 5.3 ???? ban IP

?? fail2ban-client ????? log ?????????? ban IP

```
# fail2ban-client status
Status
```

```

|- Number of jail:    1
`- Jail list:        asterisk-iptables

# fail2ban-client status asterisk-iptables
|- filter
| |- File list:      /var/log/asterisk/fail2ban
| |- Currently failed: 0
| `-- Total failed:  0
`- action
   |- Currently banned: 0
   | `-- IP list:
   `-- Total banned:   0

```

?????

?? /etc/asterisk/logger.conf

```

;syslog keyword : This special keyword logs to syslog facility
;[ ]
syslog.local0 => notice,warning,error

```

Reload Asterisk

Q:??? IP ????????

```

# iptables -D fail2ban-ASTERISK -s 123.123.123.123 -j DROP
[]
# iptables -L fail2ban-ASTERISK -nv --line-number
Chain fail2ban-ASTERISK (1 references)
num  pkts bytes target    prot opt in     out     source          destination
1     0    0 DROP      all  --  *     *       134.213.134.172  0.0.0.0/0
2     0    0 DROP      all  --  *     *       46.105.127.222  0.0.0.0/0
3     0    0 DROP      all  --  *     *       116.255.152.101 0.0.0.0/0
4   1364 363K RETURN    all  --  *     *        0.0.0.0/0       0.0.0.0/0

# iptables -D fail2ban-ASTERISK 2 ;[ ] 2 [ ]

```

Q:[Asterisk] ?????????? IP ? DDoS ?? Received incoming SIP connection





## CLI Log?

Received incoming SIP connection from unknown peer to 003333002972597886748"

??????? sip\_general.conf ? allowguest=yes (by default)?????  
??????? Sending fake auth rejection for device 100<sip:100@123.123.123.123> ??????????

???? ?? allowguest=no?????????????  
???????????????? allowguest=no???? Asterisk 11 ??????Log ????????????? IP?????????  
Fail2ban ??????

Ans: ?? /etc/asterisk/extensions.conf

```
[from-sip-external]
; [REDACTED]
exten => _,1,NoOp(Received incoming SIP connection from unknown peer to ${EXTEN})
exten => _,n,Set(DID=${IF(${EXTEN:1:2}=""?)s:${EXTEN}})})
exten => _,n,Set(foo=${SIPCHANINFO(recvp)})
exten => _,n,Log(NOTICE,Incoming SIP connection from unknown peer failed for ${foo} - Unknown connection
from peer)
exten => _,n,Hangup
exten => h,1,Hangup
exten => i,1,Hangup
exten => t,1,Hangup
```

?? /etc/fail2ban/filter.d/asterisk.conf

```
...
failregex = NOTICE.*.*: Registration from '.*' failed for '<HOST>' - Wrong password
...
...
NOTICE.*.*: Incoming SIP connection from unknown peer failed for <HOST> - Unknown connection from
peer
```

## Q:[Asterisk] ????? Sending fake auth rejection

? Asterisk 1.11+)

Failed to authenticate device 1005<sip:1005@123.123.123.123>;tag=2071f8ca

? Asterisk 1.8)

Sending fake auth rejection for device 100<sip:100@123.123.123.123>;tag=99fdd5d7

Ans??? Asterisk ????????

Asterisk 11)

?????? Security Log Level ?????????????????????? IP??????? fail2ban ????

?? /etc/fail2ban/filter.d/asterisk.conf

```
# [ ] SECURITY [ ]
failregex = Registration from '.*' failed for '<HOST>:.*' - Wrong password
...
...
    SECURITY.*.*:
SecurityEvent="(FailedACL|InvalidAccountID|ChallengeResponseFailed|InvalidPassword)",EventTV="[\\d-
]+" ,Severity="[\\w]+" ,Service="[\\w]+" ,EventVersion="[\\d]+" ,AccountID="[\\d]+" ,SessionID="0x[\\da-
f]+" ,LocalAddress="IPV[46]/(UD|TC)P/[\\da-fA-
F:.]+/\\d+" ,RemoteAddress="IPV[46]/(UD|TC)P/<HOST>/\\d+" (,Challenge="[\\w]+" ,ReceivedChallenge="[\\w]+" )?(,Re
ceivedHash="[\\da-f]+" )? $
```

Asterisk 1.8/1.6)

??? Asterisk ?????????????????? channels/chan\_sip.c ?????????????????? IP ??????????????

Asterisk ?????????? fail2abn ????

# Fail2ban Setup

?????

???: ?? /etc/fail2an/jail.conf

```
# "ignoreip" can be a list of IP addresses, CIDR masks or DNS hosts. Fail2ban
# will not ban a host which matches an address in this list. Several addresses
# can be defined using space (and/or comma) separator.
ignoreip = 127.0.0.1/8 ::1 192.168.9.0/24 192.168.31.0/24
```

???: ?? `fail2ban-client`

```
# set <JAIL> addignoreip <IP>
# set <JAIL> delignoreip <IP>
fail2ban-client set sshd addignoreip 123.123.123.123
fail2ban-client set sshd delignoreip 123.123.123.123
```

????

```
fail2ban-client get <JAIL> ignoreip
fail2ban-client get asterisk ignoreip
fail2ban-client get sshd ignoreip
```

???????

- [Persistent Banning of IP Addresses with Fail2Ban](#)
- [Fail2Ban Blacklist JAIL for Repeat Offenders](#)

# fail2ban command

?????

- [Commands - Fail2ban](#)

Cmd	Description
service fail2ban restart systemctl restart fail2ban	restart fail2ban service (after edit configuration)
fail2ban-client reload	restart fail2ban client
fail2ban-client status	get list activated jail
fail2ban-client status <JAIL> example: fail2ban-client status wplogin example: fail2ban-client status sshd	get <JAIL> status (the number of unsuccessful attempts and the list of banned IPs)
fail2ban-regex /var/lib/docker/containers/<CONTAINERID>/<CONTAINERID>-json.log /etc/fail2ban/filter.d/wplogin.conf	test regex wplogin
fail2ban-regex /var/log/auth.log /etc/fail2ban/filter.d/sshd.conf	test regex sshd
fail2ban-regex "line" "failregex"	test regex
fail2ban-client set <JAIL-NAME> unbanip <IP-ADDRESS>	manually unban IP
fail2ban-client set <JAIL-NAME> banip <IP-ADDRESS>	manually Ban IP
tail -f /var/log/fail2ban.log	view fail2ban logs
iptables -L --line-numbers	list IP blocked with line numbers
iptables -D <Jail-Name> -s <IP-ADDRESS> -j DROP Example: Jail-Name =f2b-wplogin Jail-Name =f2b-sshd	Unban IP
fail2ban-server -b	start fail2ban server
docker inspect --format '{{.LogPath}}' \$INSTANCE_ID	return instance log file path
fail2ban-client get <JAIL-NAME> ignoreip	Test ignoreip for JAIL

Check the version

```
fail2ban-client version
```

Check the Help

```
fail2ban-client -h
```