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# **syslog2iptables**

## **Packages**

The various source and binary packages are available at <http://www.five-ten-sg.com/syslog2iptables/packages/> The most recent documentation is available at <http://www.five-ten-sg.com/syslog2iptables/>

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# Name

syslog2iptables -- a simple adaptive firewall

syslog2iptables

## Synopsis

syslog2iptables [-c] [-d *n*]

## Description

**syslog2iptables** is a simple adaptive firewall. It maintains the INPUT chain of the iptables(1) firewall set based on syslog entries. These syslog entries are typically generated by your hardware firewall, but they could come from any source. Any syslog entry that contains a host name or ip address can be used as input to this package.

The syslog2iptables.conf(5) file specifies the syslog files to be monitored, and the regular expressions (regex(7)) to be applied to new lines in those files. Each regular expression needs an index to specify the matching substring that contains either an ip address or host name, and a bucket count which is added to the leaky bucket for that ip address when a matching line is read from that syslog file.

Each ip address has an associated leaky bucket, which leaks one token per second. Once the bucket contains more than a configurable threshold number of tokens, that ip address is added to the INPUT chain with a DROP target. When the bucket is drained to zero, that ip address is removed from the INPUT chain.

The discussion has focused on syslog files, but any ascii text file can be used, so long as some other process appends lines to that file, and those lines containing hostname or ip addresses can be matched with some regular expression.

Considering syslog files in particular, these are normally rotated via logrotate. **syslog2iptables** properly detects and handles this case by closing the old file, and reopening the newly created file.

## Options

-c

Load the configuration file, print a canonical form of the configuration on stdout, and exit.

-d *n*

Set the debug level to *n*.

## Usage

`syslog2iptables -d 2`

## Configuration

The configuration file is documented in `syslog2iptables.conf(5)`. Any change to the config file will cause it to be reloaded within three minutes.

## TODO

The following ideas are under consideration.

Add a global configuration option for the single iptables table name, rather than the current fixed INPUT name.

Add a configuration option for the iptables table name in the pattern statement. This implies handling multiple tables, so each table needs its own map of ip addresses and bucket values.

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# Name

syslog2iptables.conf -- configuration file for syslog2iptables

syslog2iptables.conf

## Synopsis

syslog2iptables.conf

## Description

The **syslog2iptables.conf** configuration file is specified by this partial bnf description.

```
CONFIG      := {THRESHOLD | IGNORE | FILE}+
THRESHOLD   := "threshold" THRESHOLD-INTEGER-VALUE ";"
IGNORE      := "ignore" "{" IG-SINGLE+ "};"
IG-SINGLE    := IP-ADDRESS "/" CIDR-BITS ";"
FILE        := "file" FILENAME "{" PATTERN+ "};"
PATTERN     := "pattern" REGULAR-EXPRESSION "{" {INDEX | BUCKET}+ "};"
INDEX       := "index" REGEX-INTEGER-VALUE ";"
BUCKET      := "bucket" BUCKET-ADD-INTEGER-VALUE ";"
```

## Sample

```
threshold 550;

ignore {
    127.0.0.0/8;          // localhost
};

file "/var/log/cisco.log" {
    pattern "Internet_Firewall denied (tcp|udp) ([^()*)" {
        index 2;  // zero based
        bucket 200;
    };
};

file "/var/log/secure" {
    pattern "sshd.*Failed password .* from ::ffff:(.*) port" {
        index 1;  // zero based
        bucket 400;
    };
    pattern "sshd.*Failed password .* from (.) port" {
        index 1;  // zero based
        bucket 400;
    };
};
```