Table of Contents

Detecting Dead Rules in Check Point firewall rule bases

i2drd is a simple system aiming to detect unused rules in a Check Point firewall rule base. This version is compatible with GAiA and has been tested on R77.10, R77.20 and R77.30, and should work with all later R77.x versions. It may work with other versions: the rule base format and the log file format is detected and the required information available from R65 and onwards, but the web server configuration requires R77.

UNIfw1lr is free software and released under a modified BSD License, see LICENSE. Using the software requires a valid support contract with Check Point Technologies.

i2drd is installed as an rpm package and the installation and configuration is described in `INSTALL.md`.

The system consist of the following components:

- A Web-server: the system uses the apache web server supplied and maintained by Check Point, as part of the base operating system
- A collection of applications for parsing the *rule base*, extracting information from the *exported logfile* etc.

Access to the web-server is controlled by the firewall. The server runs on **TCP port 8088**. This may be changed in `/var/opt/i2drd/etc/drd` but is not recommended.

Log files are exported on a daily basis at midnight as configured in **UNIfw1lr**.

Processing the rule base and log file in order to detect unused rules starts at 13:59. This may change in the future.

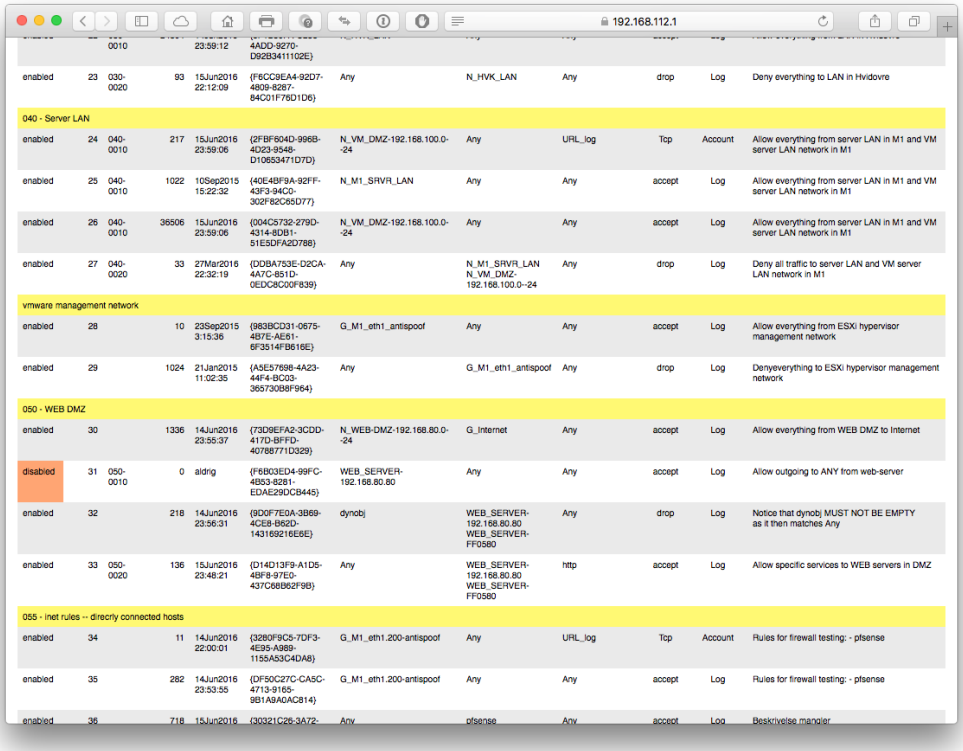
All rules has a unique *UUID* which is logged. **i2drd** reads the log file and the rule base and counts the number of hits for each UUID. The result is written to a database and includes the last time a rule had a hit.

The date and time of the first time **i2drd** runs is recorded.

House keeping

- Inactive rules are not used actively in the rule base and are marked with this color(orange). They may be deleted unless they serve any other purpose (e.g. documentation).
- Rules with no hits since *first run* are marked with this color(pink). If *logging is disabled on the rule* then consider deleting the rule: it does not serve any firewall purpose.
- Rules without hits today are marked with this color (pale yellow) and should be checked firmly. The date the rule was last used and the number of days since then is in the report.

An example is shown here:



Limitations

The scope of the application are *rules*, not the *individual sources*, *destinations* and *services* which makes up a rule.

Assume there is 100 hits on the rule below, which has 3 sources, 2 destinations and two services.

Nr.	Source	Destination	Service
1	internal_mail_1 internal_mail_2 monitor_host_1	external_mail_1 external_mail_2	SMTP ICMP

As we only know the hit count it is only possible to conclude that the rule is in use. It is however *not possible* to determine which network and service objects is used.

It may be that `monitor_host_1` is monitoring `external_mail_2` with `ICMP Echo Request` while no mail is processed.

The same goes for *group objects*, *ranges* and *networks*: one single host may be responsible for all traffic.

Proceed with care.

Notice

The package **i2drd** will be merged with **UNIfw1lr** (UNI•C firewall-1 log rotation) in the not so near future (don't hold your breath).

It is important to write documentation and guidelines as an integrated part of the software development process. So this documentation is made using common software tools and organised as text files written in vi, saved as github flavored markdown, controlled by a makefile and converted do html and pdf with discount and wkhtmltopdf. Everything kept and controlled in git.

The silly front page is made with a Mac application, saved as pdf and processed with `pdfunite`. Just for fun, and finished in shorter time than going shopping in Fakta.