

Fangfrisch

Fangfrisch (German for "freshly caught") is a sibling of the [Clam Anti-Virus](#) freshclam utility. It allows downloading virus definition files that are not official ClamAV canon, e.g. from [Sanesecurity](#) and [URLhaus](#).

1. License

Copyright © 2020 Ralph Seichter

This file is part of "Fangfrisch".

Fangfrisch is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

Fangfrisch is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with Fangfrisch. If not, see <https://www.gnu.org/licenses/>.

2. Update strategy

Fangfrisch is expected to run periodically, e.g. using [cron](#). Download attempts are recorded in a database and new attempts are only made after the defined age threshold is reached. Fangfrisch will attempt to download digests first (if available upstream), and only retrieve corresponding virus definition files when their recorded digest changes, minimising transfer volumes.

3. Installation

Fangfrisch requires Python 3.7 or newer. The recommended installation method is using the [pip command](#) in a virtual Python environment. Here is an example listing of commands for BASH:

3.1. Create home directory

```
mkdir -p /var/lib/fangfrisch
cd /var/lib/fangfrisch
```

3.2. Prepare and activate venv

```
python3 -m venv venv
source venv/bin/activate
```

3.3. Install via PyPI

```
pip install fangfrisch
```

This step will also create an executable launcher script `venv/bin/fangfrisch`.

4. Configuration

A configuration file is mandatory, uses an INI-File-like structure and must contain a `db_url` entry. All other settings are optional.

- **db_url**: Database URL in [SQLAlchemy syntax](#). Mandatory, no default. Typically, a local [SQLite](#) database will suffice.
- **enabled**: Scan this section for URLs? Default: `false`.
- **integrity_check**: Mechanism for integrity checks. Default: `sha256`. You can use `disabled` if the signature file provider offers no checksums.
- **interval**: Interval between downloads. Defaults are provider-dependent. Values can be expressed in human-readable form (e.g. `12h` or `45m`). Please respect the limits set by each provider.
- **max_size**: Maximum file size expected from the provider. Default: `10MB`. Values are can be expressed in human-readable form (e.g. `250KB` or `3MB`) and should be set per provider. Fangfrisch attempts to inspect the content length before downloading virus signature files so as not to download files larger than the defined limit.
- **on_update_exec**: If any files were downloaded during a pass, a command can be executed in after the pass finishes. No default. A typical value is `clamscan --reload`.
- **on_update_timeout**: Timeout for the `on_update_exec` command, in seconds. Default: 30.

Details about the configuration parser and extended interpolation are available [here](#). Internal default values for providers can be used by enabling sections as shown below.

```
# Example configuration

[DEFAULT]
db_url = sqlite:///var/lib/fangfrisch/fangfrisch.sqlite

# The following settings are optional. Other sections inherit
# values from DEFAULT and may also overwrite values.

local_directory = /var/lib/clamav
max_size = 5MB
on_update_exec = clamdscan --reload
on_update_timeout = 42

[sanesecurity]
enabled = yes

[securiteinfo]
enabled = yes
# Replace with your personal SecuriteInfo customer ID
customer_id = abcdef123456

[urlhaus]
enabled = yes
max_size = 2MB
```

You can also add your own sections for additional virus definition providers:

```
[fictionalprovider]
enabled = yes
integrity_check = md5
interval = 90m
prefix = http://fictional-provider.tld/clamav-unofficial/
# Reference the defined prefix in URL definitions. Values in
# other sections can be referenced using ${section:option}.
url_eggs = ${prefix}eggs.ndb
url_spam = ${prefix}spam.hdb
```

Fangfrisch will scan enabled sections for lines prefixed with `url_` to determine download sources for virus definition files. The value of `integrity_check` determines both the expected filename suffix for digests and the hashing mechanism used for verification.

5. Preparing the database

After completing the configuration, make sure to create the database structure by running the `initdb` command.

```
venv/bin/fangfrisch --conf /etc/fangfrisch.conf initdb
```

WARNING

Fangfrisch should never be run as **root**, but as an unprivileged user like **clamav**.

6. Usage

You can display command line arguments as follows:

```
$ venv/bin/fangfrisch --help

usage: fangfrisch [-h] [-c CONF] [-f] {dumpconf,initdb,refresh}

positional arguments:
  {dumpconf,initdb,refresh}
                        Action to perform

optional arguments:
  -h, --help            show this help message and exit
  -c CONF, --conf CONF  Configuration file
  -f, --force            Force action (default: False)
```

You can choose among following actions:

- **dumpconf**: Dump the effective configuration to stdout, combining both internal defaults and your own settings. The effective configuration for the example shown in [Section 4](#) is available in [Appendix B](#).
- **initdb**: Create the database structure. This needs to be run only once, before the first refresh.
- **refresh**: Refresh the configured URLs. The **force** switch can be set to force downloads regardless of local file age.

As stated before, Fangfrisch is typically run using cron. An example crontab looks like this:

```
HOME=/var/lib/fangfrisch
LOG_LEVEL=INFO
# minute hour day-of-month month day-of-week user command
*/15 * * * * clamav venv/bin/fangfrisch --conf /etc/fangfrisch.conf refresh
```

7. Contact

The project is hosted on [GitHub](#). If you experience problems or have suggestions, you should [file an issue](#). When doing so, please always check existing issues first, including closed ones. This saves time and effort for all involved. To contact the author Ralph Seichter directly you can send email to fangfrisch@seichter.de.

Appendix A: Default configuration

Fangfrisch contains the following internal configuration settings as defaults. All sections are disabled, and entries with the `!url_` prefix are included for reference only. These usually represent data sources that have a high risk of false positives, and enabling the section will not enable these entries.

```
[DEFAULT]
enabled = false
integrity_check = sha256
max_size = 10MB
on_update_exec =
on_update_timeout = 30

[sanesecurity]
interval = 2h
prefix = http://ftp.swin.edu.au/sanesecurity/
!url_foxhole_all_cdb = ${prefix}foxhole_all.cdb
!url_foxhole_all_ndb = ${prefix}foxhole_all.ndb
!url_foxhole_mail = ${prefix}foxhole_mail.cdb
!url_winnow_phish_complete = ${prefix}winnow_phish_complete.ndb
url_badmacro = ${prefix}badmacro.ndb
url_blurl = ${prefix}blurl.ndb
url_bofhland_cracked_url = ${prefix}bofhland_cracked_URL.ndb
url_bofhland_malware_attach = ${prefix}bofhland_malware_attach.hdb
url_bofhland_malware_url = ${prefix}bofhland_malware_URL.ndb
url_bofhland_phishing_url = ${prefix}bofhland_phishing_URL.ndb
url_crdfam_clamav = ${prefix}crdfam.clamav.hdb
url_doppelstern_hdb = ${prefix}doppelstern.hdb
url_doppelstern_ndb = ${prefix}doppelstern.ndb
url_doppelstern_phishtank = ${prefix}doppelstern-phishtank.ndb
url_foxhole_filename = ${prefix}foxhole_filename.cdb
url_foxhole_generic = ${prefix}foxhole_generic.cdb
url_foxhole_js_cdb = ${prefix}foxhole_js.cdb
url_foxhole_js_ndb = ${prefix}foxhole_js.ndb
url_hackingteam = ${prefix}hackingteam.hsb
url_junk = ${prefix}junk.ndb
url_jurlbl = ${prefix}jurlbl.ndb
url_jurlbla = ${prefix}jurlbla.ndb
url_lott = ${prefix}lott.ndb
url_malwareexpert_fp = ${prefix}malware.expert.fp
url_malwareexpert_hdb = ${prefix}malware.expert.hdb
url_malwareexpert_ldb = ${prefix}malware.expert.ldb
url_malwareexpert_ndb = ${prefix}malware.expert.ndb
url_malwarehash = ${prefix}malwarehash.hsb
url_phish = ${prefix}phish.ndb
url_phishtank = ${prefix}phishtank.ndb
url_porcupine = ${prefix}porcupine.ndb
url_rogue = ${prefix}rogue.hdb
```

```
url_scam = ${prefix}scam.ndb
url_scannailer = ${prefix}scannailer.ndb
url_shelter = ${prefix}shelter.ldb
url_spamattach = ${prefix}spamattach.hdb
url_spamimg = ${prefix}spamimg.hdb
url_spear = ${prefix}spear.ndb
url_spearl = ${prefix}spearl.ndb
url_winnow_attachments = ${prefix}winnow.attachments.hdb
url_winnow_bad_cw = ${prefix}winnow_bad_cw.hdb
url_winnow_extended_malware = ${prefix}winnow_extended_malware.hdb
url_winnow_extended_malware_links = ${prefix}winnow_extended_malware_links.ndb
url_winnow_malware = ${prefix}winnow_malware.hdb
url_winnow_malware_links = ${prefix}winnow_malware_links.ndb
url_winnow_phish_complete_url = ${prefix}winnow_phish_complete_url.ndb
url_winnow_spam_complete = ${prefix}winnow_spam_complete.ndb
```

[securiteinfo]

```
customer_id = you_forgot_to_configure_customer_id
interval = 12h
prefix = https://www.securiteinfo.com/get/signatures/${customer_id}/
!url_old = ${prefix}securiteinfoold.hdb
!url_spam_marketing = ${prefix}spam_marketing.ndb
url_android = ${prefix}securiteinfoandroid.hdb
url_ascii = ${prefix}securiteinfoascii.hdb
url_html = ${prefix}securiteinfohtml.hdb
url_javascript = ${prefix}javascript.ndb
url_pdf = ${prefix}securiteinfopdf.hdb
url_securiteinfo = ${prefix}securiteinfo.hdb
url_securiteinfo_ign2 = ${prefix}securiteinfo.ign2
```

[urlhaus]

```
interval = 10m
url_urlhaus = https://urlhaus.abuse.ch/downloads/urlhaus.ndb
```

Appendix B: Effective configuration

The following effective configuration is the result of combining internal defaults (see [Appendix A](#)) with the example settings shown in [Section 4](#).

[DEFAULT]

```
enabled = false
integrity_check = sha256
max_size = 5MB
on_update_exec = clamdscan --reload
on_update_timeout = 42
db_url = sqlite:///var/lib/fangfrisch/fangfrisch.sqlite
local_directory = /var/lib/clamav
```

[sanesecurity]

```
interval = 2h
prefix = http://ftp.swin.edu.au/sanesecurity/
!url_foxhole_all_cdb = ${prefix}foxhole_all.cdb
!url_foxhole_all_ndb = ${prefix}foxhole_all.ndb
!url_foxhole_mail = ${prefix}foxhole_mail.cdb
!url_winnow_phish_complete = ${prefix}winnow_phish_complete.ndb
url_badmacro = ${prefix}badmacro.ndb
url_blurl = ${prefix}blurl.ndb
url_bofhland_cracked_url = ${prefix}bofhland_cracked_URL.ndb
url_bofhland_malware_attach = ${prefix}bofhland_malware_attach.hdb
url_bofhland_malware_url = ${prefix}bofhland_malware_URL.ndb
url_bofhland_phishing_url = ${prefix}bofhland_phishing_URL.ndb
url_crdfam_clamav = ${prefix}crdfam.clamav.hdb
url_doppelstern_hdb = ${prefix}doppelstern.hdb
url_doppelstern_ndb = ${prefix}doppelstern.ndb
url_doppelstern_phishtank = ${prefix}doppelstern-phishtank.ndb
url_foxhole_filename = ${prefix}foxhole_filename.cdb
url_foxhole_generic = ${prefix}foxhole_generic.cdb
url_foxhole_js_cdb = ${prefix}foxhole_js.cdb
url_foxhole_js_ndb = ${prefix}foxhole_js.ndb
url_hackingteam = ${prefix}hackingteam.hsb
url_junk = ${prefix}junk.ndb
url_jurlbl = ${prefix}jurlbl.ndb
url_jurlbla = ${prefix}jurlbla.ndb
url_lott = ${prefix}lott.ndb
url_malwareexpert_fp = ${prefix}malware.expert.fp
url_malwareexpert_hdb = ${prefix}malware.expert.hdb
url_malwareexpert_ldb = ${prefix}malware.expert.ldb
url_malwareexpert_ndb = ${prefix}malware.expert.ndb
url_malwarehash = ${prefix}malwarehash.hsb
url_phish = ${prefix}phish.ndb
url_phishtank = ${prefix}phishtank.ndb
url_porcupine = ${prefix}porcupine.ndb
url_rogue = ${prefix}rogue.hdb
url_scam = ${prefix}scam.ndb
url_scannailer = ${prefix}scannailer.ndb
url_shelter = ${prefix}shelter.ldb
url_spamattach = ${prefix}spamattach.hdb
url_spamimg = ${prefix}spamimg.hdb
url_spear = ${prefix}spear.ndb
url_spearl = ${prefix}spearl.ndb
url_winnow_attachments = ${prefix}winnow.attachments.hdb
url_winnow_bad_cw = ${prefix}winnow_bad_cw.hdb
url_winnow_extended_malware = ${prefix}winnow_extended_malware.hdb
url_winnow_extended_malware_links = ${prefix}winnow_extended_malware_links.ndb
url_winnow_malware = ${prefix}winnow_malware.hdb
url_winnow_malware_links = ${prefix}winnow_malware_links.ndb
url_winnow_phish_complete_url = ${prefix}winnow_phish_complete_url.ndb
url_winnow_spam_complete = ${prefix}winnow_spam_complete.ndb
enabled = yes
```

[securiteinfo]

customer_id = abcdef123456

interval = 12h

prefix = https://www.securiteinfo.com/get/signatures/\${customer_id}/

!url_old = \${prefix}securiteinfoold.hdb

!url_spam_marketing = \${prefix}spam_marketing.ndb

url_android = \${prefix}securiteinfoandroid.hdb

url_ascii = \${prefix}securiteinfoascii.hdb

url_html = \${prefix}securiteinfohtml.hdb

url_javascript = \${prefix}javascript.ndb

url_pdf = \${prefix}securiteinfopdf.hdb

url_securiteinfo = \${prefix}securiteinfo.hdb

url_securiteinfo_ign2 = \${prefix}securiteinfo.ign2

enabled = yes

[urlhaus]

interval = 10m

url_urlhaus = https://urlhaus.abuse.ch/downloads/urlhaus.ndb

enabled = yes

max_size = 2MB