目录

抓包代理利器：mitmproxy

- 最新版本：`v1.0`
- 更新时间：`20210114`

简介

介绍主要用于抓包领域的代理工具mitmproxy，尤其是常用的命令行版的mitmdump。先对mitmproxy概述，再介绍mitmdump的下载和安装。包括Mac和Win中如何安装和常见问题。接下来介绍如何使用mitmdump，包括核心的通用逻辑，即先电脑端启动mitmdump代理，再去移动端初始化安装mitmproxy的根证书ssl代理证书文件，其中总结了各种iOS和安卓手机在安装根证书时候的各种坑和问题及解决办法。再去介绍如何给移动端中WiFi去设置代理。总结了常见的问题，比如No module named yaml、if you can see this, traffic is not passing through mitmproxy、Cannot validate certificate hostname without SNI、ssl3_read_bytes sslv3 alert certificate unknown、-s时无法指定python版本、检测到代理显示异常、mitmdump偶尔突然无效、ssl3_get_record wrong version number、SysCallError 10054 WSAECONNRESET等等。还有其他方面，比如用代码控制mitmdump的运行、win中如何给mitmdump的python打包成exe。最后附上mitmdump、mitmproxy和mitmweb的help语法供需要时查阅。

源码+浏览+下载

本书的各种源码、在线浏览地址、多种格式文件下载如下：

Gitbook源码

- crifan/crawler_proxy_tool_mimproxy: 抓包代理利器：mitmproxy

如何使用此Gitbook源码去生成发布为电子书

详见：crifan/gitbook_template: demo how to use crifan gitbook template and demo

在线浏览

- 抓包代理利器：mitmproxy book.crifan.com
- 抓包代理利器：mitmproxy crifan.github.io

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- 抓包代理利器：mitmproxy ePub
- 抓包代理利器：mitmproxy Mobi

版权说明

鸣谢

感谢我的老婆**陈雪**的包容理解和悉心照料，才使得我 `crifan` 有更多精力去专注技术专研和整理归纳出这些电子书和技术教程，特此鸣谢。

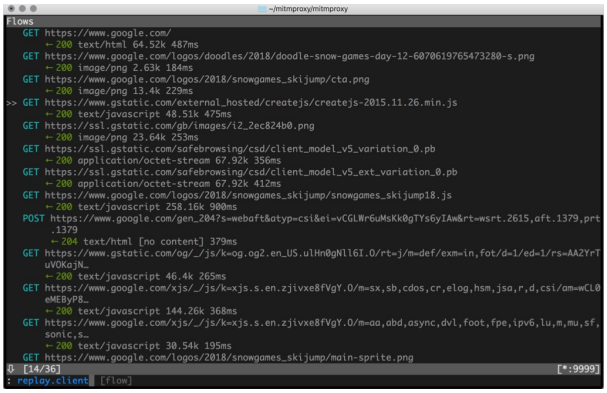
更多其他电子书

本人 `crifan` 还写了其他 `100+` 本电子书教程，感兴趣可移步至：

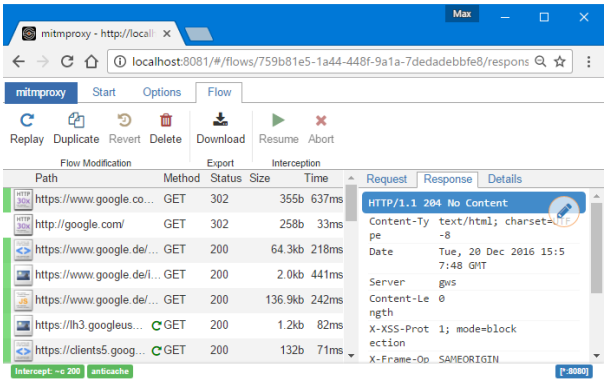
crifan/crifan_ebook_readme: Crifan的电子书的使用说明

mitmproxy概述

- `mitmproxy`
  - 名词解析
    - `mitmproxy` = `mitm` 的 `proxy`
      - `mitm` = `MITM` = `Man-In-The-Middle`
        - 直译：`人在中间`
          - 在中间 ->
            - 首先要确保原先网络请求能继续
              - 所以就是代理的功能：**正常转发**原有网络请求
            - 但也可以干很多事情
              - 比如
                - **记录**、**保存**网络请求
                - **拦截**（符合特定规则的）网络请求
                - （甚至）**篡改**、**伪造**成新的合法的或不合法的网络请求
        - 相关：往往也被叫做
          - `Man-In-The-Middle attack` = `中间人攻击`
  - `mitmproxy` 是一套工具的总称，包含
    - `mitmproxy` ：交互式命令行工具
      - 是什么=一句话概述
        - 英文
          - mitmproxy is an interactive, SSL/TLS-capable intercepting proxy with a console interface for HTTP/1, HTTP/2, and WebSockets
        - 中文
          - mitmproxy是一个代理工具
            - 功能和特点
              - 交互式的
              - 支持https拦截
              - 支持协议：`HTTP/1` 、`HTTP/2` 、`WebSockets`
                - 产品形态：控制台console中显示交互界面
      - 长什么样=截图



- `mitmweb`：基于命令行的带UI界面
  - 可以理解为：**网页版的mitmproxy**
  - 是什么=一句话描述
    - mitmweb is a web-based interface for mitmproxy
  - 长什么样=截图



- `mitmdump`：命令行版本
  - 是什么=一句话描述
    - mitmdump is the command-line version of mitmproxy. Think tcpdump for HTTP
  - 类比
    - `mitmdump` 之于 `mitmproxy`
      - 就像
        - `tcpdump` 之于 `HTTP`
  - 可以理解为
    - 命令行版本的 `Charles` / `Fiddler`

- 主要用途：实现对网页、app的抓包
- 网址
  - 官网文档
    - Introduction
      - https://docs.mitmproxy.org/stable/
  - GitHub
    - mitmproxy/mitmproxy: An interactive TLS-capable intercepting HTTP proxy for penetration testers and software developers
      - https://github.com/mitmproxy/mitmproxy

mitmdump

`mitmdump` 是 `mitmproxy` 的命令行版本。

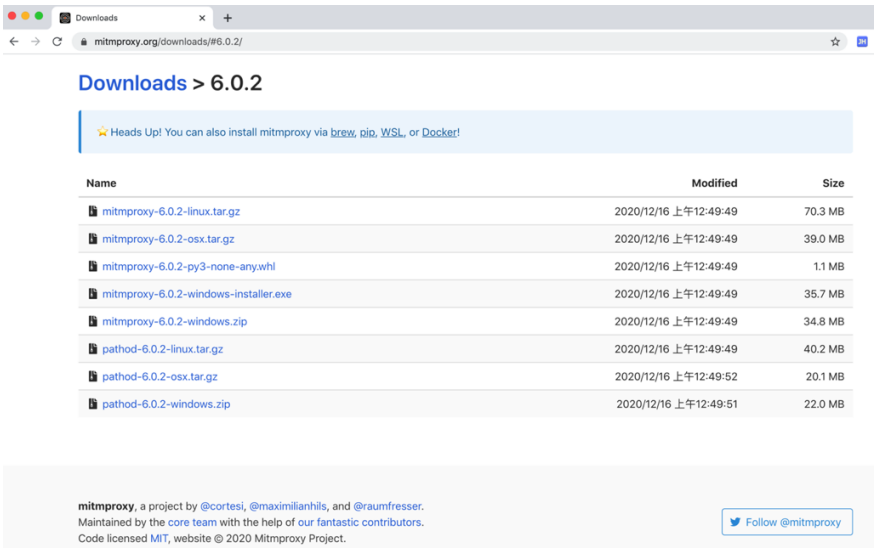
`mitmproxy` 和 `mitmdump` 的用法和逻辑基本一致。

此处主要介绍 `mitmdump` 的使用。

下载mitmproxy

官网下载地址：

- Downloads
  - https://mitmproxy.org/downloads/#6.0.2/



即可下载到对应系统的二进制可执行文件：

- Mac
  - https://snapshots.mitmproxy.org/6.0.2/mitmproxy-6.0.2-osx.tar.gz
- Win
  - https://snapshots.mitmproxy.org/6.0.2/mitmproxy-6.0.2-windows-installer.exe
  - https://snapshots.mitmproxy.org/6.0.2/mitmproxy-6.0.2-windows.zip
- Linux
  - https://snapshots.mitmproxy.org/6.0.2/mitmproxy-6.0.2-linux.tar.gz

安装mitmproxy

下载到二进制文件后，（Mac、Win、Linux等）各个系统中，即可正常安装。

Mac

Mac中也可以直接用 `brew` 去安装：

```
brew install mitmproxy
```

也可以用Python中的pip去（给Python环境中）安装：

```
pip install mitmproxy
```

注：如果后续 `mitmdump` 用到 `-s` 去加载的 `.py` 的python脚本中，用到了 `pyaml` 的话，则记得要先用 `pip` 安装 `pyyaml` ：

```
pip instal pyyaml
```

Win

安装遇到的问题

之前在win10中安装mitmproxy，遇到过2个问题：

build _openssl.c error C2065 X509_V_FLAG_CB_ISSUER_CHECK undeclared identifier

```
creating build\temp.win-amd64-3.8\Release\build\temp.win-ar
  C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\BI
  _openssl.c
  build\temp.win-amd64-3.8\Release\_openssl.c(1369): warnir
  build\temp.win-amd64-3.8\Release\_openssl.c(11095): erro
  build\temp.win-amd64-3.8\Release\_openssl.c(11096): erro
  build\temp.win-amd64-3.8\Release\_openssl.c(12429): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(12429): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(12452): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(13565): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(13575): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(13589): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(13599): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(16441): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(16465): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(16465): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(16475): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(16575): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(16599): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19290): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19290): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19300): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19350): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19350): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19360): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19374): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19374): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(19384): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(22275): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(23380): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(23404): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(25957): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(26094): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(32153): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(34129): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(34152): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(34609): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(34709): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(34793): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(38288): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(46480): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(46520): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(46713): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(46773): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49146): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49146): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49156): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49170): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49170): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49180): warn
```

```
  build\temp.win-amd64-3.8\Release\_openssl.c(49194): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49194): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49204): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49218): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49218): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49228): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49242): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49242): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49252): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49266): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49266): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49276): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49290): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49290): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49300): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49314): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49314): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49324): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49338): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49338): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(49348): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(50421): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(50421): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(50444): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(50457): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(50457): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(50480): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(50659): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(50712): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(53826): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(53826): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(53849): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(54363): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(54620): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(57001): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(57001): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(57024): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(57037): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(57037): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(57060): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(57500): warn
  build\temp.win-amd64-3.8\Release\_openssl.c(57553): warn
  error: command 'C:\\Program Files (x86)\\Microsoft Visua
  ----------------------------------------
  ERROR: Failed building wheel for cryptography
  Running setup.py clean for cryptography
Failed to build cryptography
ERROR: Could not build wheels for cryptography which use PE
```

经过一番折腾，但最后是没解决。

具体过程详见：

- 【未解决】windows中pip安装mitmproxy报错： build _openssl.c error C2065 X509_V_FLAG_CB_ISSUER_CHECK undeclared identifier

ERROR: Could not build wheels for cryptography which use PEP 517 and cannot be installed directly

```
> pip install mitmproxy
......
Collecting pycparser
  Using cached https://files.pythonhosted.org/packages/68/9
Building wheels for collected packages: cryptography
  Building wheel for cryptography (PEP 517) ... error
  ERROR: Command errored out with exit status 1:
   command: 'c:\program files\python38\python.exe' 'c:\prog
       cwd: C:\Users\xxx\AppData\Local\Temp\pip-install-x4
  Complete output (112 lines):
  running bdist_wheel
  running build
  running build_py
  creating build
  creating build\lib.win-amd64-3.8
  creating build\lib.win-amd64-3.8\cryptography
  copying src\cryptography\exceptions.py -> build\lib.win-a
  copying src\cryptography\fernet.py -> build\lib.win-amd64
  copying src\cryptography\utils.py -> build\lib.win-amd64-
  copying src\cryptography\__about__.py -> build\lib.win-am
  copying src\cryptography\__init__.py -> build\lib.win-amd
  creating build\lib.win-amd64-3.8\cryptography\hazmat
  copying src\cryptography\hazmat\_oid.py -> build\lib.win-
  copying src\cryptography\hazmat\__init__.py -> build\lib.
  creating build\lib.win-amd64-3.8\cryptography\x509
  copying src\cryptography\x509\base.py -> build\lib.win-am
  copying src\cryptography\x509\certificate_transparency.py
  copying src\cryptography\x509\extensions.py -> build\lib.
  copying src\cryptography\x509\general_name.py -> build\li
  copying src\cryptography\x509\name.py -> build\lib.win-am
  copying src\cryptography\x509\ocsp.py -> build\lib.win-am
  copying src\cryptography\x509\oid.py -> build\lib.win-amd
  copying src\cryptography\x509\__init__.py -> build\lib.wi
  creating build\lib.win-amd64-3.8\cryptography\hazmat\back
  copying src\cryptography\hazmat\backends\interfaces.py ->
  copying src\cryptography\hazmat\backends\__init__.py -> b
  creating build\lib.win-amd64-3.8\cryptography\hazmat\bind
  copying src\cryptography\hazmat\bindings\__init__.py -> b
  creating build\lib.win-amd64-3.8\cryptography\hazmat\prim
  copying src\cryptography\hazmat\primitives\cmac.py -> bui
  copying src\cryptography\hazmat\primitives\constant_time.
  copying src\cryptography\hazmat\primitives\hashes.py -> b
  copying src\cryptography\hazmat\primitives\hmac.py -> bui
  copying src\cryptography\hazmat\primitives\keywrap.py ->
  copying src\cryptography\hazmat\primitives\mac.py -> buil
  copying src\cryptography\hazmat\primitives\padding.py ->
  copying src\cryptography\hazmat\primitives\serialization.
  copying src\cryptography\hazmat\primitives\__init__.py ->
  creating build\lib.win-amd64-3.8\cryptography\hazmat\back
  copying src\cryptography\hazmat\backends\openssl\aead.py
```

```
    copying src\cryptography\hazmat\backends\openssl\backend.
    copying src\cryptography\hazmat\backends\openssl\ciphers.
    copying src\cryptography\hazmat\backends\openssl\cmac.py
    copying src\cryptography\hazmat\backends\openssl\decode_a
    copying src\cryptography\hazmat\backends\openssl\dh.py ->
    copying src\cryptography\hazmat\backends\openssl\dsa.py -
    copying src\cryptography\hazmat\backends\openssl\ec.py ->
    copying src\cryptography\hazmat\backends\openssl\encode_a
    copying src\cryptography\hazmat\backends\openssl\hashes.p
    copying src\cryptography\hazmat\backends\openssl\hmac.py
    copying src\cryptography\hazmat\backends\openssl\ocsp.py
    copying src\cryptography\hazmat\backends\openssl\rsa.py -
    copying src\cryptography\hazmat\backends\openssl\utils.py
    copying src\cryptography\hazmat\backends\openssl\x25519.p
    copying src\cryptography\hazmat\backends\openssl\x509.py
    copying src\cryptography\hazmat\backends\openssl\__init__
    creating build\lib.win-amd64-3.8\cryptography\hazmat\bind
    copying src\cryptography\hazmat\bindings\openssl\binding.
    copying src\cryptography\hazmat\bindings\openssl\_conditi
    copying src\cryptography\hazmat\bindings\openssl\__init__
    creating build\lib.win-amd64-3.8\cryptography\hazmat\prim
    copying src\cryptography\hazmat\primitives\asymmetric\dh.
    copying src\cryptography\hazmat\primitives\asymmetric\dsa
    copying src\cryptography\hazmat\primitives\asymmetric\ec.
    copying src\cryptography\hazmat\primitives\asymmetric\pad
    copying src\cryptography\hazmat\primitives\asymmetric\rsa
    copying src\cryptography\hazmat\primitives\asymmetric\uti
    copying src\cryptography\hazmat\primitives\asymmetric\x25
    copying src\cryptography\hazmat\primitives\asymmetric\__i
    creating build\lib.win-amd64-3.8\cryptography\hazmat\prim
    copying src\cryptography\hazmat\primitives\ciphers\aead.p
    copying src\cryptography\hazmat\primitives\ciphers\algori
    copying src\cryptography\hazmat\primitives\ciphers\base.p
    copying src\cryptography\hazmat\primitives\ciphers\modes.
    copying src\cryptography\hazmat\primitives\ciphers\__init
    creating build\lib.win-amd64-3.8\cryptography\hazmat\prim
    copying src\cryptography\hazmat\primitives\kdf\concatkdf.
    copying src\cryptography\hazmat\primitives\kdf\hkdf.py ->
    copying src\cryptography\hazmat\primitives\kdf\kbkdf.py -
    copying src\cryptography\hazmat\primitives\kdf\pbkdf2.py
    copying src\cryptography\hazmat\primitives\kdf\scrypt.py
    copying src\cryptography\hazmat\primitives\kdf\x963kdf.py
    copying src\cryptography\hazmat\primitives\kdf\__init__.p
    creating build\lib.win-amd64-3.8\cryptography\hazmat\prim
    copying src\cryptography\hazmat\primitives\twofactor\hotp
    copying src\cryptography\hazmat\primitives\twofactor\totp
    copying src\cryptography\hazmat\primitives\twofactor\util
    copying src\cryptography\hazmat\primitives\twofactor\__in
    running egg_info
    writing src\cryptography.egg-info\PKG-INFO
    writing dependency_links to src\cryptography.egg-info\dep
```

```
  writing requirements to src\cryptography.egg-info\require
  writing top-level names to src\cryptography.egg-info\top_
  reading manifest file 'src\cryptography.egg-info\SOURCES.
  reading manifest template 'MANIFEST.in'
  no previously-included directories found matching 'docs\_
  warning: no previously-included files matching '*' found
  writing manifest file 'src\cryptography.egg-info\SOURCES.
  running build_ext
  generating cffi module 'build\\temp.win-amd64-3.8\\Releas
  creating build\temp.win-amd64-3.8
  creating build\temp.win-amd64-3.8\Release
  generating cffi module 'build\\temp.win-amd64-3.8\\Releas
  generating cffi module 'build\\temp.win-amd64-3.8\\Releas
  building '_openssl' extension
  creating build\temp.win-amd64-3.8\Release\build
  creating build\temp.win-amd64-3.8\Release\build\temp.win-
  creating build\temp.win-amd64-3.8\Release\build\temp.win-
  C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\BI
  _openssl.c
  build\temp.win-amd64-3.8\Release\_openssl.c(498): fatal e
  error: command 'C:\\Program Files (x86)\\Microsoft Visua'
  ----------------------------------------
  ERROR: Failed building wheel for cryptography
  Running setup.py clean for cryptography
Failed to build cryptography
ERROR: Could not build wheels for cryptography which use PE
```

也试了：

```
pip install cryptography
```

但问题依旧。

以及：

```
python -m pip install --no-use-pep517 mitmproxy
```

但报其他错误：

```
    copying src\cryptography\hazmat\primitives\twofactor\__
    running egg_info
    writing src\cryptography.egg-info\PKG-INFO
    writing dependency_links to src\cryptography.egg-info\d
    writing requirements to src\cryptography.egg-info\requ
    writing top-level names to src\cryptography.egg-info\to
    reading manifest file 'src\cryptography.egg-info\SOURCE
    reading manifest template 'MANIFEST.in'
    no previously-included directories found matching 'docs
    warning: no previously-included files matching '*' foun
    writing manifest file 'src\cryptography.egg-info\SOURCE
    running build_ext
    generating cffi module 'build\\temp.win-amd64-3.8\\Rele
    creating build\temp.win-amd64-3.8
    creating build\temp.win-amd64-3.8\Release
    generating cffi module 'build\\temp.win-amd64-3.8\\Rele
    generating cffi module 'build\\temp.win-amd64-3.8\\Rele
    building '_openssl' extension
    creating build\temp.win-amd64-3.8\Release\build
    creating build\temp.win-amd64-3.8\Release\build\temp.wi
    creating build\temp.win-amd64-3.8\Release\build\temp.wi
    C:\Program Files (x86)\Microsoft Visual Studio 14.0\VC\
    _openssl.c
    build\temp.win-amd64-3.8\Release\_openssl.c(498): fatal
    error: command 'C:\\Program Files (x86)\\Microsoft Visu
    ----------------------------------------
  Rolling back uninstall of cryptography
  Moving to c:\program files\python38\lib\site-packages\cry
   from C:\Program Files\Python38\Lib\site-packages\~rypto
  Moving to c:\program files\python38\lib\site-packages\cry
   from C:\Program Files\Python38\Lib\site-packages\~rypto
ERROR: Command errored out with exit status 1: 'C:\Program
```

以及其他折腾。

但最后是没解决。

具体过程详见：

- 【未解决】windows中pip install mitmproxy失败：ERROR Could not build wheels for cryptography which use PEP 517 and cannot be installed directly

如何使用

在（Mac、Win等）PC端安装了mitmproxy后，自带mitmdump。

此处介绍如何去使用mitmdump。

通用逻辑

核心的通用逻辑是：

- 电脑端
  - 启动 `mitmdump` 代理
- 移动端
  - （初始化，只需第一次）安装 `mitmproxy` 的**根证书**
  - 给WiFi设置（PC端的mitmdump的）代理

即可正常使用代理，实现给移动端抓包等功能。

电脑端启动mitmdump代理

比如，PC端运行对应命令：

```
mitmdump -k -p 8081 -s middleware/Save1.py
```

即可。

接下来分不同平台详细介绍具体细节。

Mac

接着介绍，如何在 `Mac` 中使用 `mitmdump`

举例：

`Mac` 中终端去运行：

```
mitmdump -k -p 8081 -s middleware/Save1.py
```

启动mitmdump的代理

然后给手机端加上此处Mac的mitmdump的代理

即可实现：脚本 `Save1.py` 把手机端发出的所有的 `url = 请求 = 链接地址` （还可以根据自己需要做一定过滤处理后再）保存起来（比如保存到一个文件中），供后续使用。

说明

此处的Save1.py是个python脚本

具体内容：

```python
# _*_ coding: utf-8 _*_

import json
import re
import os
import sys
# print("sys.executable=%s" % sys.executable)

try:
    import yaml
except Exception as err:
    print("Failed to import yaml: %s" % err)

class Saver:

    def __init__(self):
        self.Allurls = set()
        self.DataFilePath = self.get_DataFilePath()
        self.REMOVED = self.get_NeedSkip()

    def get_DataFilePath(self):
        # SavePath = "./middleware/Save.json"
        SavePath = os.path.join("middleware", "Save.json")
        with open(SavePath,"r",encoding="utf-8") as f:
            text = f.read()
            data = json.loads(text)
            return data["1"]

    def get_NeedSkip(self):
        # filepath = "./middleware/config.yml"
        filepath = os.path.join("middleware", "config.yml")
        try:
            with open(filepath, "r", encoding="utf-8") as f
                text = f.read()
        except Exception:
            with open(filepath, "r") as f:
                text = f.read()
        config = yaml.load(text)
        REMOVED = [item.replace('.','\.') for item in conf
        return "|".join(REMOVED)

    def get_ContentType(self, headers):
        ContentType = "None"
        patten = "b'Accept', b'(.*?)'"
        result = re.search(patten, headers)
        if result:
            ContentType = result.group(1)
            ContentType = ContentType.split(",")[0]
        return ContentType if not "*" in ContentType else
```

```
    def request(self, flow):
        url = flow.request.url
        ContentType = self.get_ContentType(str(flow.request
        if not url in self.Allurls and not re.search(self.F
            self.Allurls.add(url)
            print(url)
            with open(self.DataFilePath, "a", encoding="utf
                f.write(url + "|" + ContentType)
                f.write('\n')

addons = [Saver()]
```

若想要后台运行，则后面加 `&`

```
mitmdump -k -p 8081 -s middleware/Save1.py &
```

移动端安装mitmproxy根证书

通用逻辑

即给移动端手机中安装 `mitmproxy` 的

`SSL代理证书` = `ssl证书` = `根证书` = `root CA`

核心逻辑：

- 手机中浏览器中打开 http://mitm.it
- 然后根据提示去下载（ `pem` 或 `crt` ）证书（文件）
- 点击安装证书文件

iOS

此处整理iOS的iPhone手机中，安装mitmproxy的根证书的详细情况：

- iOS
  - iPhone
    - 详见
      - 【已解决】给iPhone添加mitmproxy的mitmdump代理用于保存抓包链接到文件
      - 【已解决】iPhone8P中安装mitmproxy的CA的ssl证书

Android

此处整理安卓手机中，安装mitmproxy的根证书，对于不同手机的详细情况：

- Android
  - 华为
    - 荣耀
      - 【记录】给安卓手机中安装mitmproxy代理的SSL证书
      - 【记录】给自动抓包工具的安卓手机设置mitmproxy代理用于能抓包到链接地址
  - 小米
    - 小米9
      - 相关
        - 【已解决】安卓手机小米9中安装mitmproxy的SSL代理证书
          - 【无需解决】小米9中WLAN或WAPI证书中找不到mitmproxy的SSL的pem证书文件
          - 【无法解决】小米9中用ES文件管理器安装pem证书
    - 红米Note8Pro
      - 问题
        - 用微信或小米浏览器无法下载pem证书文件
      - 解决办法：
        - 换QQ浏览器就可以正常下载pem证书文件 mitmproxy-ca-cert.pem
          - 细节
            - 不能用：
              - 微信
                - 点击Android无反应
              - 小米浏览器
                - 点击Android，弹框下载：perm.crt
                  - 而不是希望的：mitmproxy-ca-cert.pem
                  - 关键是：始终无法下载成功
            - 只能用：QQ浏览器
              - 点击Android，可以弹框下载：mitmproxy-ca-cert.pem
                - 是我们希望的pem证书
                - 也可以正常（瞬间）下载完毕
      - 详见

            - 【无法解决】红米Note8Pro中用微信或小米浏览器下载mitmproxy的SSL代理证书
            - 【已解决】红米Note8Pro中用QQ浏览器下载mitmproxy的Android的SSL代理证书
        - 相关
            - 【已解决】红米Note8Pro中安装mitmproxy的SSL代理证书
    - 红米10X
        - 问题：下载证书失败
            - 自带小米浏览器
                - 可弹框下载pem.crt，但下载失败
            - QQ浏览器
                - 可弹框下载mitmproxy-ca-cert.pem，但下载失败
                - 偶然甚至会提示：
                    - if you can see this, traffic is not passing through mitmproxy
            - UC浏览器
                - 可弹框下载mitmproxy-ca-cert.pem，但下载失败
                - 偶然甚至会提示：
                    - if you can see this, traffic is not passing through mitmproxy
        - 解决办法：
            - 试了多次，最后终于：
                - UC浏览器
                    - 可弹框并成功下载mitmproxy-ca-cert.pem
        - 详见：
            - 【已解决】红米10X安卓手机中无法下载mitmproxy的证书文件
- Vivo
    - iQOO U1x
        - 用QQ浏览器无法下载pem文件，提示下载失败
            - 解决办法：换Vivo的内置浏览器，即可下载mitmproxy-ca-cert.pem
        - 直接点击pem证书文件，无法安装：未找到证书文件
            - 问题现象
                - QQ浏览器下载到mitmproxy-ca-cert.pem，直接点击提示：找不到对应程序打开该文件
                - 更多安全设置-》从手机存储和SD卡安装，点击提示：未找到证书文件
                - 从文件管理中点击已下载的mitmproxy-ca-cert.pem，选 证书安装程序，也提示：未找到证书文件

        - 原因：Vivo不支持pem证书文件，只支持crt证书文件
        - 解决办法：把文件pem后缀改为crt
            - 点击即可正常安装
    - 详见：
        - 【已解决】给安卓手机ViVo的iQOO U1x下载和安装mitmproxy的SSL代理证书
        - 【已解决】安卓手机Vivo的iQOO U1x中手动安装mitmproxy-ca-cert.pem证书文件
        - 【已解决】安卓手机Vivo的iQOO U1x中点击安装mitmproxy的pem证书报错：未找到证书文件
        - 【未解决】给安卓手机Vivo的iQOO U1x初始化mitmdump的代理环境

移动端给WiFi设置代理

之后再去给移动端的WiFi设置（PC端的mitmdump的）代理（信息）。

- 细节详见
  - 如何添加代理 移动端 · 网络中转站：代理技术

此处简单举例如下：

iOS

iPhone

常见问题

No module named yaml

- **现象**

Mac中用brew安装了mitmproxy，然后去运行：

```
mitmdump -p 8081 -s middleware/Save1.py
```

但是报错：

```
No module named yaml
```

- **原因**

Mac中通过brew安装的mitmproxy，会调用自己内部安装的python（此处是3.7.5）

而不是Mac中自己Python（2.7或3.8），mac中的python中都安装过yaml了

而mitmproxy中python，没有安装过yaml，所以上述脚本会报错。

- **解决办法**

不要用brew安装，而是用系统中的python的pip去安装mitmproxy

```
pip install mitmproxy
```

注：系统中的python是,此处是用的3.8，用pyenv设置全局为3.8

另外此处2.7的python中，pip安装mitmproxy会失败。

之后即可正常调用

```
mitmdump -p 8081 -s middleware/Save1.py
```

其中python解析器用的是此处系统的python了，因此可以正常找到（系统中python中已安装的）yaml，而不会报错了。

具体细节详见：

- 【基本解决】Mac中mitmdump运行命令报错：in script py No module named yaml

if you can see this, traffic is not passing through mitmproxy

- **现象**

手机中浏览器打开 http://mitm.it 后，看到页面提示：

```
if you can see this, traffic is not passing through mitmproxy
```

- **原因**

需要你手机中WiFi加上PC端的mitmproxy（mitmdump）的代理后，打开 http://mitm.it 后才能正常显示页面

- **解决办法**
  - PC端（Mac）中启动mitmproxy的代理
    - 举例
      - `mitmdump -k -p 8081 -s middleware/Save1.py`
  - 然后再给手机端的当前WiFi中加上对应的mitmdump的代理

细节详见：

【已解决】红米Note8Pro中去下载mitmproxy证书提示：if you can see this, traffic is not passing through mitmproxy

Cannot validate certificate hostname without SNI

此处通过：

```
mitmdump -k -p 8081 -s middleware/Save1.py
```

加上了

- -k == --ssl-insecure
  - Do not verify upstream server SSL/TLS certificates

从而规避了：

```
TlsException('Cannot validate certificate hostname without
```

的问题。

- 细节详见
  - 【已解决】mitmproxy代理报错：Cannot establish TLS with 443 sni None TlsException Cannot validate certificate hostname without SNI
  - 【未解决】安卓抓包mitmproxy报错：TlsException SSL handshake Error routines ssl3_get_record wrong version number

sslv3 alert certificate unknown

mitmdump访问部分url出错：

比如：

某次报错：

```
192.168.31.177:50670: CONNECT 6ib5h.com:443
<< Cannot establish TLS with client (sni: 6ib5h.com): TlsE
```

和

抓包安卓app `现金巴士` 时：

对应mitmdump的log：

```
<< Cannot establish TLS with client (sni: app.cashbus.com)
```

```
192.168.31.172:54677: clientconnect
192.168.31.172:54677: CONNECT app.cashbus.com:443
 << Cannot establish TLS with client (sni: app.cashbus.com): TlsExcep
tion("SSL handshake error: Error([('SSL routines', 'ssl3_read_bytes',
 'sslv3 alert certificate unknown')])")
192.168.31.172:54677: clientdisconnect
```

- **原因**

app内部做了certificate pinning 证书固定 的技术

app内部给证书做了指纹，只允许来自服务器的证书，匹配后才认为是合法的有效的，否则就拒绝

即拒绝那些指纹不匹配的证书

- **如何解决**
  - 分2种情况：
    - 用 `tls_passthrough.py` 实现部分解决
    - 无法解决

用 `tls_passthrough.py` 实现部分解决

借用别人的脚本：

- tls_passthrough.py

去：

- 要么直接利用：
  - `mitmproxy -s tls_passthrough.py`
- 要么整理到自己的脚本中：
  - `mitmdump -p 8081 -s Save1.py`

其中：`Save1.py`

```
# _*_ coding: utf-8 _*_

import json
import re
import os
import sys
print("sys.executable=%s" % sys.executable)

class Saver:

    def __init__(self):
        ...

    def request(self, flow):
        curReq = flow.request
    url = curReq.url
        headers = curReq.headers
        print("url=%s, headers=%s" % (url, headers))
    # do what you want
    # eg: save something to some file

addons = [Saver()]

"""
This inline script allows conditional TLS Interception base
on a user-defined strategy.
Example:
    > mitmdump -s tls_passthrough.py
    1. curl --proxy http://localhost:8080 https://example.c
    // works - we'll also see the contents in mitmproxy
    2. curl --proxy http://localhost:8080 https://example.c
    // still works - we'll also see the contents in mitmpro
    3. curl --proxy http://localhost:8080 https://example.c
    // fails with a certificate error, which we will also s
    4. curl --proxy http://localhost:8080 https://example.c
    // works again, but mitmproxy does not intercept and we
Authors: Maximilian Hils, Matthew Tuusberg
"""
import collections
import random

from enum import Enum

import mitmproxy
from mitmproxy import ctx
from mitmproxy.exceptions import TlsProtocolException
from mitmproxy.proxy.protocol import TlsLayer, RawTCPLayer

class InterceptionResult(Enum):
    success = True
```

```
    failure = False
    skipped = None

class _TlsStrategy:
    """
    Abstract base class for interception strategies.
    """

    def __init__(self):
        # A server_address -> interception results mapping
        self.history = collections.defaultdict(lambda: col

    def should_intercept(self, server_address):
        """
        Returns:
            True, if we should attempt to intercept the co
            False, if we want to employ pass-through instea
        """
        raise NotImplementedError()

    def record_success(self, server_address):
        self.history[server_address].append(InterceptionRes

    def record_failure(self, server_address):
        self.history[server_address].append(InterceptionRes

    def record_skipped(self, server_address):
        self.history[server_address].append(InterceptionRes

class ConservativeStrategy(_TlsStrategy):
    """
    Conservative Interception Strategy - only intercept if
    in the history.
    """

    def should_intercept(self, server_address):
        if InterceptionResult.failure in self.history[serve
            return False
        return True

class ProbabilisticStrategy(_TlsStrategy):
    """
    Fixed probability that we intercept a given connection.
    """

    def __init__(self, p):
        self.p = p
        super(ProbabilisticStrategy, self).__init__()

    def should_intercept(self, server_address):
        return random.uniform(0, 1) < self.p
```

```
class TlsFeedback(TlsLayer):
    """
    Monkey-patch _establish_tls_with_client to get feedbacl
    successfully on the client connection (which may fail c
    """

    def _establish_tls_with_client(self):
        server_address = self.server_conn.address

        try:
            super(TlsFeedback, self)._establish_tls_with_c
        except TlsProtocolException as e:
            tls_strategy.record_failure(server_address)
            raise e
        else:
            tls_strategy.record_success(server_address)

# inline script hooks below.

tls_strategy = None

def load(l):
    l.add_option(
        "tlsstrat", int, 0, "TLS passthrough strategy (0-10
    )

def configure(updated):
    global tls_strategy
    if ctx.options.tlsstrat > 0:
        tls_strategy = ProbabilisticStrategy(float(ctx.opti
    else:
        tls_strategy = ConservativeStrategy()

def next_layer(next_layer):
    """
    This hook does the actual magic - if the next layer is
    we check if we want to enter pass-through mode instead.
    """
    if isinstance(next_layer, TlsLayer) and next_layer._cli
        server_address = next_layer.server_conn.address

        if tls_strategy.should_intercept(server_address):
            # We try to intercept.
            # Monkey-Patch the layer to get feedback from t
            next_layer.__class__ = TlsFeedback
        else:
            # We don't intercept - reply with a pass-throug
            mitmproxy.ctx.log("TLS passthrough for %s" % re
            next_layer_replacement = RawTCPLayer(next_layer
```

```
            next_layer.reply.send(next_layer_replacement)
            tls_strategy.record_skipped(server_address)
```

- **效果**：至少不报错了

mitmproxy的log会显示相关的 `TLS passthrough` ：

```
TLS passthrough for ('app.cashbus.com', 443)
```

其他（https的？）资源（图片等）类的文件可以正常加载，页面可以显示（图片）等内容了：

- 细节详见

    - 【已解决】提取自动抓包工具中的mitmdump自动保存代理抓包出来的url链接保存到文件
    - 【已解决】mitmproxy代理抓包安卓app数据访问出错：Cannot establish TLS with client sni TlsException

无法解决

- **彻底的解决办法**：修改app的逻辑和规则，允许你（的非法）的证书。
    - 很明显：是别人的app，自己无法修改。所以此处实际上无解
        - 除非你能破解app，重新编译和运行破解后的app，把证书的限制去掉。

另外：此处被测app是一个安卓游戏app，也没有时间去折腾破解app

也没必要：因为最终方案是希望支持无限多的安卓游戏app，所以一个个破解，也不现实不可行。

总之：无解，且放弃

- 相关
    - 安卓破解 Certificate pinning
        - 作者提到了一些关于逆向工程安卓app方面的资料
            - 需要给app打包，用于跳过证书验证，换成自己证书
        - 相关资料：
            - Android Security: SSL Pinning. Using SSL in an Android app is easy… | by Matthew Dolan | Medium
            - Bypassing Certificate Pinning on Android for fun and profit | by Felipe Lima | Medium
            - ->
            - Bypassing SSL Pinning on Android via Reverse Engineering.pdf
                - https://dl.packetstormsecurity.net/papers/general/android-sslpinning.pdf
- 细节详见
    - 【无法解决】安卓游戏加了代理后支付页面时mitmdump报错：TlsException SSL handshake error Error SSL routines ssl3_read_bytes sslv3 alert certificate unknown

`-s` 时无法指定python版本

此处

```
mitmdump -s xxx.py
```

中，无法指定加载 `xxx.py` 脚本时，所用的 `Python的版本`

-> 会导致，导入一些python库时，即使你Python环境已安装了该库（比如 `pyyaml` ），仍会报错

-> 因为其只用调用（mitmdump所）内置的Python的版本，无法换成当前（Mac）系统中的某个版本的Pyton

- 细节详见
  - 【无法解决】Mac中mitmdump通过-s加载python脚本时指定Python版本
  - 【已解决】mac中Python2和Python3都已安装了yaml但mitmdump -s加载python脚本中导入yaml还是报错
  - 【已解决】Mac中让mitmdump解析python脚本不用自己内置Python而是用系统Python
  - 【已解决】Mac中运行mitmdump再次报错：Failed to import yaml
  - 【已解决】Mac中mitmdump运行命令报错：in script py No module named yaml

检测到代理显示异常

有些app、网页等，技术做的相对先进，能自动检测是否有代理：

- 如果检测到有代理
  - 会出现警告
  - 甚至不显示内容
  - 或者显示内容异常
  - 等等
- 对应解决办法：去掉代理
  - 比如切换到没有代理的WiFi

下面总结一下这些异常情况：

安全警告 该网站的安全证书存在问题

安卓手机中安装了mitmproxy代理后，部分app页面（首次打开）会弹框提示证书问题

比如 安卓中的微信的某些页面，第一次访问某些其他网站时，会提示证书问题：

- 【已解决】自动抓包工具适配iOS：安全警告弹框提示该网站的安全证书存在问题
  - 

- vivo应用市场登录后，偶尔也有同样弹框

点击了继续后，后续就不会再提示。

类似问题：

当你Wifi代理有变动，比如：

- 去掉WiFi的mitmproxy的代理后，重新加上
- 换了一个WiFi，重新加上代理

等等情况，则会被视为第一次使用代理，第一次打开页面时，就仍会出现上述弹框提示。同理，点击继续后，之后不会再提示。

显示空白页面或者只显示部分内容

另外，有些安卓游戏，加了代理后，会导致游戏中和安全相关的，尤其是支付相关页面，会无法正常显示内容。

比如空白页面：

或者是 只能显示部分内容：

底部支付方式没显示：

后来经过多次点击，偶尔才能完整显示内容：

网络异常，请检查网络设置

iOS的app 斑马AI课 会提示：

> 网络异常，请检查网络设置
>
> 请检查您当前的网络环境，如果其他App可以正常使用，请到设置-斑马AI课-无线数据中允许斑马AI课访问网络。检查后，点击重试按钮。

无法连接服务器，请退出重试

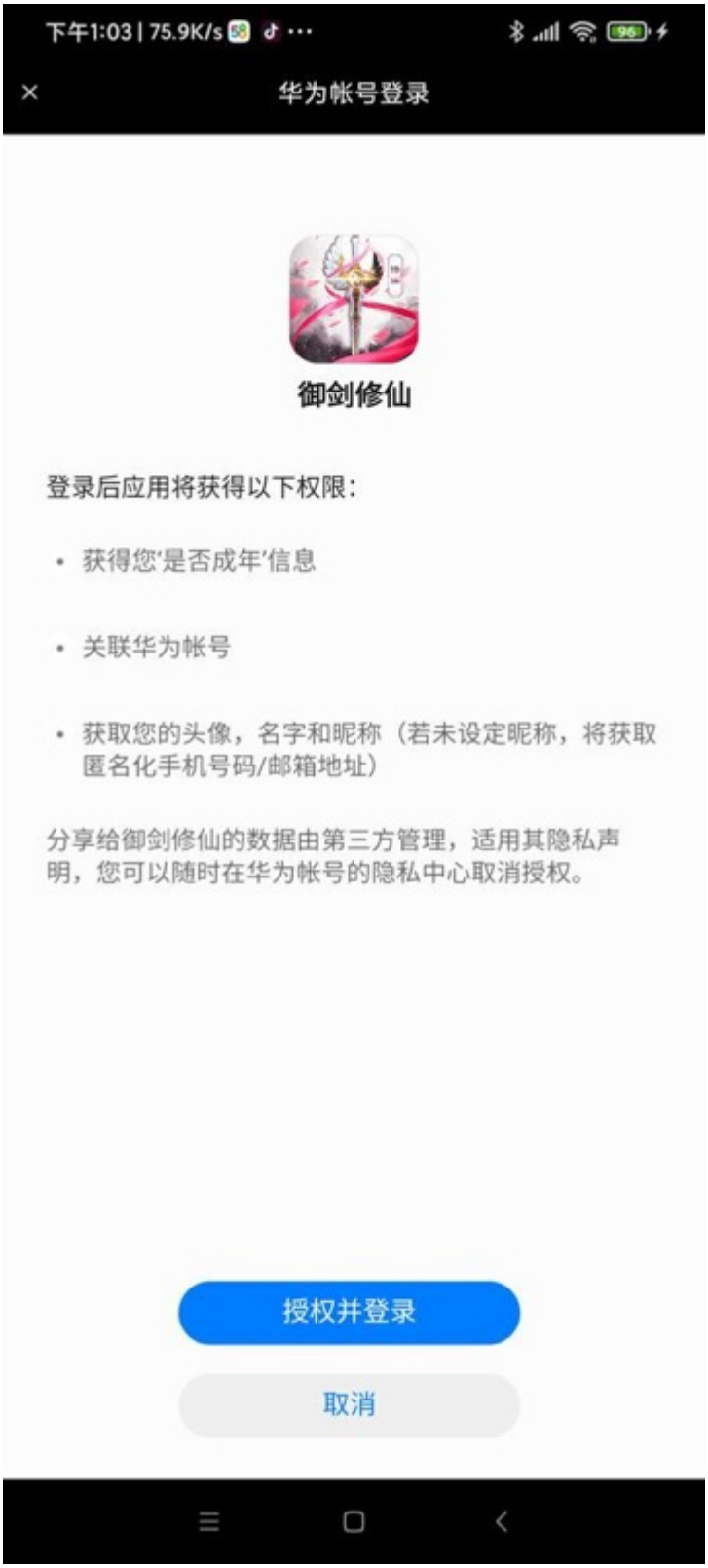
对于来自华为应用市场的游戏app，在登录时需要先登录华为应用市场。

当华为应用市场检测到有代理时，就会无法显示，报错：

无法连接服务器，请退出重试

解决办法：去掉代理

才能正常加载授权页面：

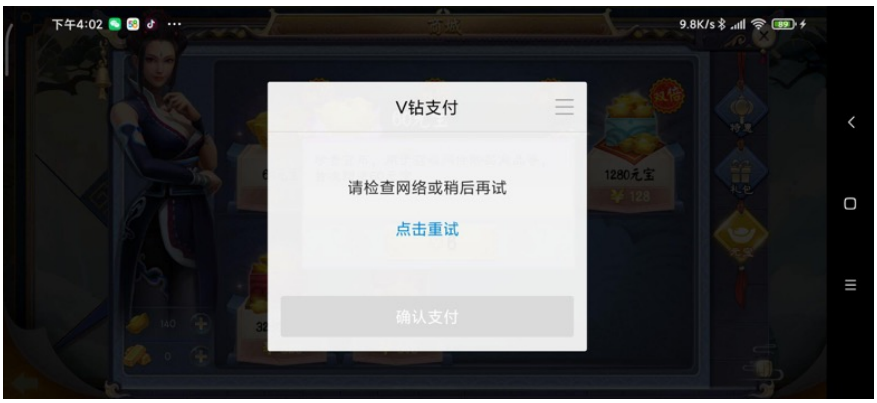

下午1:03 | 75.9K/s
华为帐号登录
御剑修仙
登录后应用将获得以下权限：
• 获得您'是否成年'信息
• 关联华为帐号
• 获取您的头像，名字和昵称（若未设定昵称，将获取匿名化手机号码/邮箱地址）
分享给御剑修仙的数据由第三方管理，适用其隐私声明，您可以随时在华为帐号的隐私中心取消授权。
授权并登录
取消

无法加载，请点击重试

偶尔vivo的支付弹框，也会出现，检测到代理后，无法正常显示，提示：

请检查网络或稍后再试

点击重试



点击一下，即可正常显示：

或者类似的：

加载失败

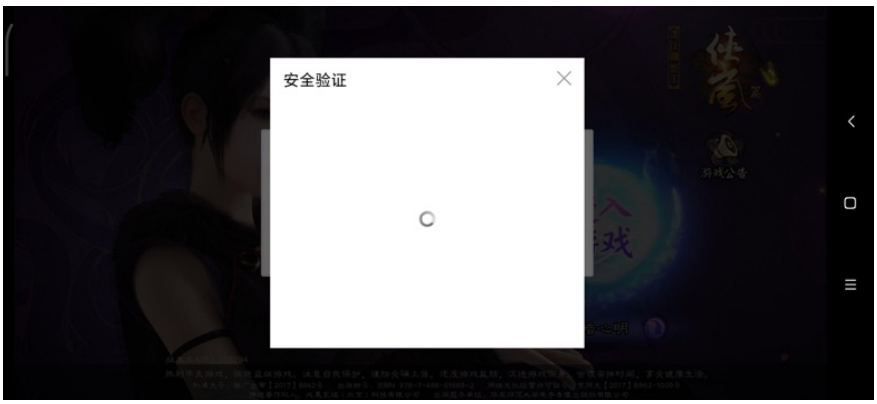
点击重试

点击一下，即可正常显示支付：

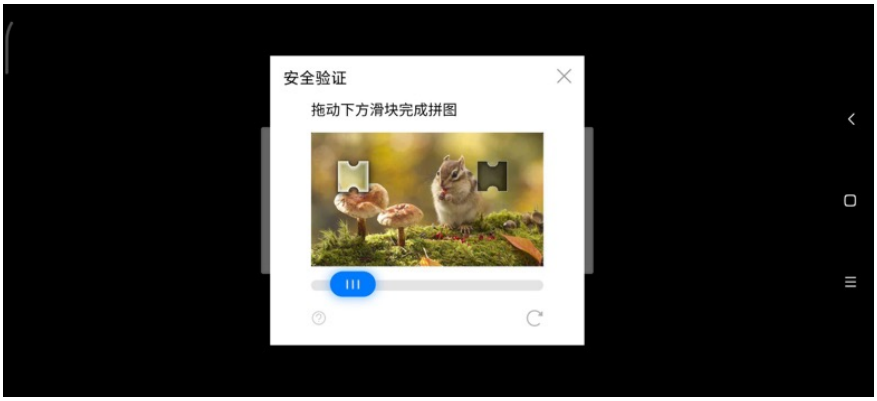
页面卡死在加载中

游戏app发行到vivo应用市场后，登录时往往要登录vivo账号。

其中一种登录弹框时，先显示 滑动补全缺口的图的验证码 的弹框，当vivo发现有代理时，则验证码图片弹框完全就无法显示，且卡死在验证码图片加载页面：



（通过切换WiFi而）去掉代理后，验证码图片才能正常显示：



支付方式弹框不显示，显示等待中

某游戏检测到有了代理后，支付弹框不显示，只提示：正在等待支付

请检查网络后，刷新重试！

小米应用市场发行的游戏登录时也需要登录小米账号授权，检测到代理后，会报错：

请检查网络后，刷新重试！

mitmdump偶尔突然无效

- **现象**

Mac中正常启动mitmdump：

```
mitmdump -p 8081 -s middleware/Save1.py
```

作为手机中WiFi的代理，一直可以正常工作。

但是最近遇到几次了：

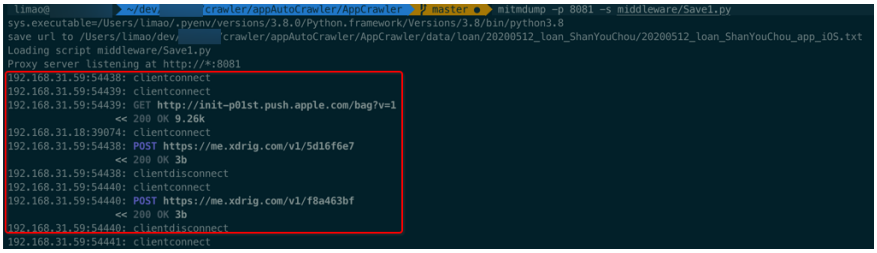
突然，不知道什么原因，mitmdump，就无效了。

导致手机中虽然设置了mitmdump的代理，但是传入mitmdump的脚本无效，无法过滤出url，保存到文件中了。

- **解决办法**：切换WiFi

无意间发现：切换WiFi，比如从 `xxx_guest` 切换到 `xxx_guest_5G` ：

即可解决此问题，mitmdump又重新正常工作了，手机端代理就生效了：



后记：

- 手机中：切换不同的WiFi（再加上代理）
  - 多试试几次，也可以规避此 代理不工作 的问题

ssl3_get_record wrong version number

- **现象**

自动抓包工具抓取安卓app `GoFun出行` 期间，mitmproxy的log中一直出现：

```
192.168.31.172:37547: CONNECT gofunsa.shouqiev.com:8106
 << Cannot establish TLS with gofunsa.shouqiev.com:8106 (sr
```

```
192.168.31.172:37547: clientconnect
192.168.31.172:37547: CONNECT gofunsa.shouqiev.com:8106
 << Cannot establish TLS with gofunsa.shouqiev.com:8106 (sni: gofunsa.
shouqiev.com): TlsException("SSL handshake error: Error([('SSL routine
s', 'ssl3_get_record', 'wrong version number')])")
192.168.31.172:37547: clientdisconnect
192.168.31.172:34227: clientconnect
192.168.31.172:34227: GET http://restapi.amap.com/v4/feedback?ts=15737
24203119&key=8c6ad4a74b2adf5466da3ad53d35cd28&scode=a5568934b3d7d4b3d1
0cd511347bbd9f&pname=3dmap
                  << 200 OK 171b
```

- **尝试解决**

```
openssl s_client -debug -connect gofunsa.shouqiev.com:8106
```

输出有：

```
SSL-Session:
    Protocol  : TLSv1.2
    Cipher    : 0000
    Session-ID:
    Session-ID-ctx:
    Master-Key:
    Start Time: 1573725685
    Timeout   : 7200 (sec)
    Verify return code: 0 (ok)
```

看起来版本没问题，是：`TLS v1.2`

后来注意到上面输出了：

```
4574582380:error:1400410B:SSL routines:CONNECT_CR_SRVR_HELI
```

也说是：

- wrong version number
  - and then try adding flags from this set: `-no_ssl2`, `-no_ssl3` and `-no_tls1` (consult the s_client(1) manual page for more details) to work out which version of SSL/TLS has to be enabled for the connection to succeed.

另外通过：

```
□ brew info openssl
openssl: stable 1.0.2t (bottled) [keg-only]
SSL/TLS cryptography library
https://openssl.org/
Not installed
From: https://github.com/Homebrew/homebrew-core/blob/maste
==> Caveats
A CA file has been bootstrapped using certificates from the
keychain. To add additional certificates (e.g. the certific
the System keychain), place .pem files in
  /usr/local/etc/openssl/certs

and run
  /usr/local/opt/openssl/bin/c_rehash

openssl is keg-only, which means it was not symlinked into
because Apple has deprecated use of OpenSSL in favor of its

==> Analytics
install: 145,281 (30 days), 708,633 (90 days), 5,855,621 (3
install_on_request: 61,384 (30 days), 181,370 (90 days), 87
build_error: 0 (30 days)
```

可以看出此处mac安装的openssl的库的版本，是1.0.2t的?

后来：

```
mitmdump --help
```

其中有：

- --ssl-insecure, -k
  - Do not verify upstream server SSL/TLS certificates

有空再试试能否解决此问题。

- 细节详见 *【未解决】安卓抓包mitmproxy报错：TlsException SSL handshake Error routines ssl3_get_record wrong version number

SysCallError 10054 WSAECONNRESET

- **背景**

部分 https=tls=ssl 的url抓包，Mac中正常，但是Windows报错：

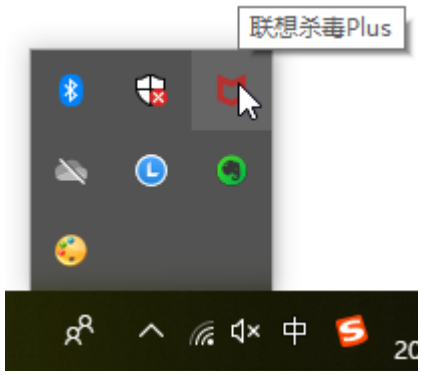
```
192.168.31.172:55087: CONNECT store1.hispace.hicloud.com:44
<< Cannot establish TLS with client (sni: store1.hispace.hi
TLS passthrough for ('tmge.alicdn.com', 443)
192.168.31.172:56214: CONNECT dnkeeper.hicloud.com:443
<< Cannot establish TLS with client (sni: dnkeeper.hicloud.
TLS passthrough for ('zconfig.alibabausercontent.com', 443)

192.168.31.172:54363: CONNECT lf.snssdk.com:443
<< Cannot establish TLS with client (sni: lf.snssdk.com): T
192.168.31.172:52353: CONNECT gecko-hl.snssdk.com:443
<< Cannot establish TLS with client (sni: gecko-hl.snssdk.c
192.168.31.172:42426: CONNECT sf3-ttcdn-tos.pstatp.com:443
<< Cannot establish TLS with client (sni: sf3-ttcdn-tos.pst
192.168.31.172:36743: CONNECT webcast-hl.amemv.com:443
<< Cannot establish TLS with client (sni: webcast-hl.amemv.
```

以及后来的游戏中点击付费按钮，产生的付费链接：

```
Loading script  mitmdumpUrlSaver.py
Proxy server listening at http://*:8081

192.168.31.172:57502: CONNECT hm.baidu.com:443
<< Cannot establish TLS with client (sni: hm.baidu.com): TT

192.168.31.172:40054: CONNECT apiouterh5.37.com:443
<< Cannot establish TLS with client (sni: apiouterh5.37.com

192.168.31.172:44871: CONNECT apipayh5.37.com:443<< Cannot

TLS passthrough for ('apipayh5.37.com', 443)192.168.31.172:

192.168.31.172:57503: CONNECT h5.37.com:443<< Cannot establ
TLS passthrough for ('h5.37.com', 443)

TLS passthrough for ('hm.baidu.com', 443)192.168.31.172:575
<< Cannot establish TLS with client (sni: paysdk.37.com): T

TLS passthrough for ('paysdk.37.com', 443)
```

即，出现问题：

- 都是TLS passthrough掉了，保存的txt文件中，没有这些https的url
- 或者是部分https游戏付费链接 都是SSL handshake error

- **可能的原因**
    - windows中此处mitmproxy本身有问题?
    - windows中此处ssl底层库有问题?
    - windows中此处杀毒软件有问题?
        - 因为后来看到有个 联想杀毒plus
        - 

        - 不知道对此是否有影响?

其他

此处整理一些和 `mitmdump` 相关的其他内容。

代码调用

- **背景需求**

Mac中想要用Python代码去控制 `mitmdump` ，即可以启动和停止 `mitmdump`

问题就转化为，Mac中如何写Python代码，能够检测到mitmdump的进程状态，如何解析具体信息，如何杀死对应，mitmdump进程等过程。

- **最后代码**

```
def stopExistingMitmproxy(curDevId):
    logging.info("curDevId=%s", curDevId)
    curDevIdInt = int(curDevId)
    isCheckCmdRunOk, mitmdumpInfoList = checkMitmdumpStatus
    logging.info("isCheckCmdRunOk=%s, mitmdumpInfoList=%s",
    isRunning = bool(mitmdumpInfoList)
    logging.info("isRunning=%s", isRunning)

    if isCheckCmdRunOk and isRunning:
        foundExistedDevId = False
        existedPid = None

        for eachMitmdumpInfo in mitmdumpInfoList:
            eachDevId = eachMitmdumpInfo["devId"]
            if eachDevId == curDevIdInt:
                foundExistedDevId = True
                existedPid = eachMitmdumpInfo["pid"]
                break

        if foundExistedDevId:
            killOK, errCode = utils.killProcess(existedPid
            logging.info("killOK=%s, errCode=%s", killOK, e

def debugStartProxy():
    stopExistingMitmproxy(gCurDevId)

    taskFileFullPath = "/Users/limao/dev/xxx/crawler/appAut
    taskId = "5e9552d1c5c2eb3ccdf777bc"
    startTaskProxy(taskId, gCurDevId, taskFileFullPath)

    time.sleep(2)

    isCheckCmdRunOk, mitmdumpInfoList = checkMitmdumpStatus
    logging.info("isCheckCmdRunOk=%s, mitmdumpInfoList=%s",

def checkMitmdumpStatus():
    # check mitmdump is indeed running
    isCheckCmdRunOk, mitmdumpInfoList = False, []
    checkMitmdumpCmd = "ps aux | grep mitmdump"
    isCheckCmdRunOk, cmdResult = utils.getCommandOutput(che
    logging.info("isCheckCmdRunOk=%s, cmdResult=%s", isChec
    if isCheckCmdRunOk:
        # resultList = cmdResult.split("\n")
        resultList = cmdResult.split(os.linesep)
        logging.info("resultList=%s", resultList)
        # limao           56562   0.0  0.0  4267948    664
        # limao           56560   0.0  0.0  4268636   1112
        # limao           55396   0.0  0.1  4381268  11568
        if resultList:
            for eachLine in resultList:
```

```
                logging.info("eachLine=%s", eachLine)
                mitmdumpP = "^\s*(?P<username>\w+)\s+(?P<p
                foundMitmdump = re.search(mitmdumpP, eachL
                logging.info("foundMitmdump=%s", foundMitm
                if foundMitmdump:
                    username = foundMitmdump.group("usernam
                    pid = foundMitmdump.group("pid")
                    port = foundMitmdump.group("port")
                    devId = foundMitmdump.group("devId")
                    scriptFile = foundMitmdump.group("scrip
                    logging.info("username=%s, pid=%s, port
                    curMitmdumpDict = {
                        "username": username,
                        "pid": int(pid),
                        "port": int(port),
                        "scriptFile": scriptFile,
                        "devId": int(devId),
                    }
                    mitmdumpInfoList.append(curMitmdumpDict
    logging.info("mitmdumpInfoList=%s", mitmdumpInfoList)
    return isCheckCmdRunOk, mitmdumpInfoList

def killProcess(pid):
    """Kill process by pid

    Args:
        pid (id): process ID
    Returns:
    Raises:
    """
    isKillOk, errCode = False, 0
    pidInt = int(pid)
    killCmd = "kill -9 %s" % pidInt
    returnCode = os.system(killCmd)
    logging.debug("Command: %s -> returnCode=%s", killCmd,
    RETURN_CODE_OK = 0
    if returnCode == RETURN_CODE_OK:
        isKillOk = True
    else:
        errCode = returnCode
    return isKillOk, errCode
```

基本完成了想要的功能：

- 在启动任务前，启动mitmproxy
- 如果之前已有当前设备id的mitmdump在运行，就kill掉
  - 因为很可能是之前的旧的task的对应的代理，所以要关闭掉，再重新启动，才能传递当前task的data文件
- 然后再去启动mitmproxy，之后再去检测看看是否的确已启动

后续优化版本

全局定义：

```
MitmdumpPortBase = 8080
curDevId = 1
RunProxyShellFilename = "runProxy.sh"
```

生成mitmproxy命令

```
#---------- generate start service command ----------

def generateMitmproxyStartCommand(curDevId):
    curMitmdumpPort = MitmdumpPortBase + int(curDevId)
    # mitmproxyStartCommand = "mitmdump -p %d -s middlewar
    mitmproxyStartCommand = "mitmdump -k -p %d -s middlewa
    logging.debug("mitmproxyStartCommand=%s", mitmproxySta
    # mitmdump -k -p 8081 -s middleware/Save1.py
    mitmproxyCommandList = [
        # "cd /Users/limao/dev/xxx/crawler/appAutoCrawler/
        "cd %s" % AppCralwerFolder,
        "pwd",
        mitmproxyStartCommand,
    ]
    logging.debug("mitmproxyCommandList=%s", mitmproxyComm
    # ['cd /Users/limao/dev/xxx/crawler/appAutoCrawler/App
    # mitmproxyCommandStr = ";".join(mitmproxyCommandList)
    # mitmproxyCommandStr = "; ".join(mitmproxyCommandList
    mitmproxyCommandStr = "\n".join(mitmproxyCommandList)
    # cd /Users/limao/dev/xxx/crawler/appAutoCrawler/AppCr
    # pwd
    # mitmdump -k -p 8081 -s middleware/Save1.py
    logging.debug("mitmproxyCommandStr=%s", mitmproxyComma
    return mitmproxyCommandStr
```

调用：

```
mitmproxyCmdStr = generateMitmproxyStartCommand("1")
```

和此处的：

```
#---------- generate shell file ----------
def generateRunProxyShell(devId, taskId):
    mitmproxyCmdStr = generateMitmproxyStartCommand(devId)
    logging.debug("mitmproxyCmdStr=%s", mitmproxyCmdStr)
    return generateShellFile(mitmproxyCmdStr, RunProxyShel
```

停止当前正在运行的mitmdump

```
def stopExistingMitmproxy(curDevId):
    logging.debug("curDevId=%s", curDevId)
    curDevIdInt = int(curDevId)
    isCheckOk, isRunning, mitmdumpInfoList = detectMitmdump
    logging.debug("isCheckOk=%s, isRunning=%s, mitmdumpInfo

    if isCheckOk and isRunning:
        foundExistedDevId = False
        existedPidInt = None

        for eachMitmdumpInfo in mitmdumpInfoList:
            eachDevIdStr = eachMitmdumpInfo["devId"]
            eachDevIdInt = int(eachDevIdStr)
            if eachDevIdInt == curDevIdInt:
                foundExistedDevId = True
                existedPidStr = eachMitmdumpInfo["pid"]
                existedPidInt = int(existedPidStr)
                break

        if foundExistedDevId:
            killOK, errCode = utils.killProcess(existedPid
            logging.debug("killOK=%s, errCode=%s", killOK,

            logging.info("%s to stopped mitmproxy", killOK
```

调用：

```
devId="1"
stopExistingMitmproxy(devId)
```

确保mitmdump已运行

```
CheckServiceRunningInterval = 2.0

def makesureProxyingRunning(devId, taskId):
    def checkProxyStatus():
        isCheckOk, isRunning, infoList = detectMitmdumpStat
        return isCheckOk and isRunning

    def startCurTaskProxy():
        startTaskProxy(devId, taskId)

    makesureServiceRunning(checkProxyStatus, startCurTaskPr

def detectMitmdumpStatus():
    # crifanli 9428 0.0 0.6 4341956 19792 s006 S+ 9:16上午
    # crifanli 10982 0.0 0.0 4268032 776 s005 S+ 1:51下午 0
    # crifanli 10980 0.0 0.0 4278852 1116 s005 S+ 1:51下午
    # mitmdumpP = "^\s*(?P<username>\w+)\s+(?P<pid>\d+)\s+.
    mitmdumpP = "^\s*(?P<username>\w+)\s+(?P<pid>\d+)\s+.+
    return utils.grepProcessStatus("mitmdump", mitmdumpP)

def makesureServiceRunning(checkStatusCallback, startServic
    isRunning = False
    while not isRunning:
        # isRunning = eval(checkStatusCallback)
        isRunning = checkStatusCallback()
        logging.debug("isRunning=%s", isRunning)
        if isRunning:
            break
        else:
            logging.info("%s not running, try to start", se
            # eval(startServiceCallback)
            startServiceCallback()

        logging.info("Wait %d seconds", CheckServiceRunning
        time.sleep(CheckServiceRunningInterval)

    logging.info("%s is running", serviceName)
```

Mac中调用Terminal终端去启动mitmdump

```
# CurFilePath = __file__
CurFilePath = os.path.abspath(__file__)
print("CurFilePath=%s" % CurFilePath)
PlatformIntegrationFolder = os.path.dirname(CurFilePath)
print("PlatformIntegrationFolder=%s" % PlatformIntegrationF

OutputFolderName = "output"
OutputRootFolder = os.path.join(PlatformIntegrationFolder,

def getTaskRootFolder(taskId):
    taskIdStr = str(taskId)
    taskFolder = os.path.join(OutputRootFolder, "tasks", ta
    return taskFolder

def getTaskShellFolder(taskId):
    taskRootFolder = getTaskRootFolder(taskId)
    taskShellFolder = os.path.join(taskRootFolder, "shell")
    return taskShellFolder

def startTaskProxy(devId, taskId):
    logging.info("Start proxy for: devId=%s, taskId=%s", de
    proxyShellFile = generateRunProxyShell(devId, taskId)
    logging.debug("proxyShellFile=%s", proxyShellFile)
    utils.launchTerminalRunShellCommand(proxyShellFile)

def generateRunProxyShell(devId, taskId):
    mitmproxyCmdStr = generateMitmproxyStartCommand(devId)
    logging.debug("mitmproxyCmdStr=%s", mitmproxyCmdStr)
    return generateShellFile(mitmproxyCmdStr, RunProxyShell

def generateShellFile(fileContentStr, shellFilename, taskId
    """Generate shell file, which is used to run command
        such as
            mitmdump proxy
            crawlerStart.py
            USB port forward
            wda server(xcodebuild/XCode)
    """
    logging.debug("fileContentStr=%s, shellFilename=%s, tas
    if taskId:
        shellFolder = getTaskShellFolder(taskId)
        # /Users/limao/dev/xxx/crawler/appAutoCrawler/AppCr
    else:
        shellFolder = OutputRootFolder
    logging.debug("shellFolder=%s", shellFolder)
    shellFullPath = os.path.join(shellFolder, shellFilename
    logging.debug("shellFullPath=%s", shellFullPath)
    # /Users/limao/dev/xxx/crawler/appAutoCrawler/AppCrawle
    shellAbsFullPath = os.path.abspath(shellFullPath)
    logging.debug("shellAbsFullPath=%s", shellAbsFullPath)
```

```
    respShellFullPath = shellAbsFullPath
    utils.saveTextToFile(respShellFullPath, fileContentStr)
    utils.chmodAddX(shellFullPath, isOnlySelf=False)
    # utils.chmodAddX(respShellFullPath)
    logging.debug("respShellFullPath=%s", respShellFullPath)
    # /Users/limao/dev/xx/crawler/appAutoCrawler/AppCrawler
    return respShellFullPath
```

调用到的相关的库函数：

`other/common/libs/utils.py`

```
import re

#-----------------------------------------------------------
# Process
#-----------------------------------------------------------

def runCommand(consoleCommand):
    """run command using subprocess call"""
    isRunCmdOk = False
    errMsg = "Unknown Error"

    try:
        resultCode = subprocess.check_call(consoleCommand,
        if resultCode == 0:
            isRunCmdOk = True
            errMsg = ""
        else:
            isRunCmdOk = False
            errMsg = "%s return code %s" % (consoleCommand,
    except subprocess.CalledProcessError as callProcessErr:
        isRunCmdOk = False
        errMsg = str(callProcessErr)
        # "Command 'ffmpeg -y -i /Users/crifan/.../debug/ex

    return isRunCmdOk, errMsg

def getCommandOutput(consoleCommand, consoleOutputEncoding=
    """
        get command output from terminal
    """
    # print("getCommandOutput: consoleCommand=%s" % console
    isRunCmdOk = False
    consoleOutput = ""
    try:
        # consoleOutputByte = subprocess.check_output(conso

        consoleOutputByte = subprocess.check_output(console

        # commandPartList = consoleCommand.split(" ")
        # print("commandPartList=%s" % commandPartList)
        # consoleOutputByte = subprocess.check_output(comma
        # print("type(consoleOutputByte)=%s" % type(console
        # print("consoleOutputByte=%s" % consoleOutputByte)

        consoleOutput = consoleOutputByte.decode(consoleOut
        consoleOutput = consoleOutput.strip() # '640x360'
        isRunCmdOk = True
    except subprocess.CalledProcessError as callProcessErr:
        cmdErrStr = str(callProcessErr)
        print("Error %s for run command %s" % (cmdErrStr, c
```

```
    # print("isRunCmdOk=%s, consoleOutput=%s" % (isRunCmdOk
    return isRunCmdOk, consoleOutput

def launchTerminalRunShellCommand(shellFile, isForceNewInst
    """in Mac, Launch terminal(Mac Terminal / iTerm2) and e

    Args:
        shellFile (str): shell file full path
        isUseiTerm2 (bool): True to use iTerm2, False to us
        isForceNewInstance (bool): whether pase -n to open,
    Returns:
    Raises:
    """
    logging.debug("shellFile=%s, isForceNewInstance=%s, isU

    TerminalApp_iTerm2 = '/Applications/iTerm.app'
    TerminalApp_Terminal = 'Terminal'
    if isUseiTerm2:
        terminalApp = TerminalApp_iTerm2
    else:
        terminalApp = TerminalApp_Terminal

    cmdList = [
        "/usr/bin/open",
    ]

    if isForceNewInstance:
        cmdList.append("-n")

    extarArgs = shellFile
    restCmdList = [
        "-a",
        terminalApp,
        '--args',
        extarArgs,
    ]
    cmdList.extend(restCmdList)
    logging.debug("cmdList=%s" % cmdList)

    curProcess = subprocess.Popen(cmdList, stdin=subprocess
    logging.debug("curProcess=%s" % curProcess)

    returnCode = None
    while True:
        returnCode = curProcess.poll()
        logging.debug("returnCode=%s", returnCode)
        if returnCode is not None:
            logging.debug("subprocess end: returnCode=%s",
            break
        time.sleep(0.5)
```

```
    logging.debug("Final returnCode=%s", returnCode)
    logging.debug("Complete launch %s and run shell %s", te

def killProcess(pid):
    """Kill process by pid

    Args:
        pid (id): process ID
    Returns:
    Raises:
    """
    isKillOk, errCode = False, 0
    pidInt = int(pid)
    killCmd = "kill -9 %s" % pidInt
    returnCode = os.system(killCmd)
    logging.debug("Command: %s -> returnCode=%s", killCmd,
    RETURN_CODE_OK = 0
    if returnCode == RETURN_CODE_OK:
        isKillOk = True
    else:
        errCode = returnCode
    return isKillOk, errCode

def grepProcessStatus(processFile, singleLinePattern, psCmd
    """grep process info status from ps output

    Args:
        processFile (str): process file name
        singleLinePattern (str): single process line search
        psCmd (str): ps command, default: ps aux
    Returns:
    Raises:
    Examples:
        input: "crawlerStart.py", "^\s*(?P<username>\w+)\s+
        output: [{'username': 'limao', 'pid': '64320', 'tas
    """
    logging.debug("processFile=%s, singleLinePattern=%s", p
    isCheckCmdRunOk, isRunning, processInfoList = False, Fa

    groupNameList = re.findall("\(\?P<(\w+)>", singleLinePa
    logging.debug("groupNameList=%s", groupNameList)
    # groupNameList=['username', 'pid', 'port', 'scriptFile
    grepProcessCmd = "%s | grep %s" % (psCmd, processFile)
    logging.debug("grepProcessCmd=%s", grepProcessCmd)
    isCheckCmdRunOk, cmdResult = getCommandOutput(grepProce
    logging.debug("isCheckCmdRunOk=%s, cmdResult=%s", isChe
    if isCheckCmdRunOk:
        # lineSeparator = "\n"
        lineSeparator = os.linesep
        resultList = cmdResult.split(lineSeparator)
```

```
        logging.debug("resultList=%s", resultList)
        # limao            56562   0.0  0.0  4267948    664
        # limao            56560   0.0  0.0  4268636   1112
        # limao            55396   0.0  0.1  4381268  11568
        if resultList:
            for eachLine in resultList:
                logging.debug("eachLine=%s", eachLine)
                foundProcess = re.search(singleLinePattern,
                logging.debug("foundProcess=%s", foundProce
                if foundProcess:
                    curProcessInfoDict = {}
                    for eachKey in groupNameList:
                        curValue = foundProcess.group(eachK
                        curProcessInfoDict[eachKey] = curVa
                    logging.debug("curProcessInfoDict=%s",
                    processInfoList.append(curProcessInfoDi

    isRunning = bool(processInfoList)
    logging.debug("isRunning=%s, processInfoList=%s", isRun
    return isCheckCmdRunOk, isRunning, processInfoList
```

注：

相关库文件的最新版，详见：

- https://github.com/crifan/crifanLibPython/blob/master/python3/crifanLib/crifanSystem.py
  - `grepProcessStatus`
  - `killProcess`
  - `launchTerminalRunShellCommand`
  - `getCommandOutput`
  - `runCommand`

打包exe

`windows` 中用 `PyInstaller` 打包 `python` 脚本为exe文件

其中python脚本调用到 `mitmdump`

可以理解为：打包mitmdump的Python为exe

核心命令：

```
pyinstaller pymitmdump\mitmdumpStartApi.py --distpath pymit

pyinstaller pymitmdump\mitmdumpOtherApi.py --distpath pymit
```

可以生成2个exe文件。

- 细节详见：【已解决】windows中用PyInstaller打包mitmdump的Python脚本为exe

附录

下面列出相关参考资料。

help语法

mitmdump --help

```
□ mitmdump --help
usage: mitmdump [options] [filter]

positional arguments:
  filter_args           Filter expression, equivalent to se

optional arguments:
  -h, --help            show this help message and exit
  --version             show version number and exit
  --options             Show all options and their default
  --commands            Show all commands and their signatu
  --set option[=value]  Set an option. When the value is or
                        and sequences are emptied. Boolean
  -q, --quiet           Quiet.
  -v, --verbose         Increase log verbosity.
  --mode MODE, -m MODE  Mode can be "regular", "transparent
                        SPEC is host specification in the t
  --no-anticache
  --anticache           Strip out request headers that migh
  --no-showhost
  --showhost            Use the Host header to construct UR
  --rfile PATH, -r PATH
                        Read flows from file.
  --scripts SCRIPT, -s SCRIPT
                        Execute a script. May be passed mul
  --stickycookie FILTER
                        Set sticky cookie filter. Matched a
  --stickyauth FILTER   Set sticky auth filter. Matched aga
  --save-stream-file PATH, -w PATH
                        Stream flows to file as they arrive
  --no-anticomp
  --anticomp            Try to convince servers to send us
  --flow-detail LEVEL   The display detail level for flows
                        status code, WebSocket and TCP mess
                        2 + full response content, content

Proxy Options:
  --listen-host HOST    Address to bind proxy to.
  --listen-port PORT, -p PORT
                        Proxy service port.
  --no-server, -n
  --server              Start a proxy server. Enabled by de
  --ignore-hosts HOST   Ignore host and forward all traffic
                        (range), not the hostname. In regul
                        value is interpreted as a regular e
  --allow-hosts HOST    Opposite of --ignore-hosts. May be
  --tcp-hosts HOST      Generic TCP SSL proxy mode for all
                        The communication contents are prin
  --upstream-auth USER:PASS
                        Add HTTP Basic authentication to up
```

```
  --proxyauth SPEC      Require proxy authentication. Forma
                        htpasswd file, or "ldap[s]:url_serv
  --no-rawtcp
  --rawtcp              Enable/disable experimental raw TCP
                        match tcp_hosts. The heuristic is v
  --no-http2
  --http2               Enable/disable HTTP/2 support. HTTP

SSL:
  --certs SPEC          SSL certificates of the form "[doma
                        file at path is a certificate in PE
                        the conf dir is used. The PEM file
                        entry. May be passed multiple times
  --no-ssl-insecure
  --ssl-insecure, -k    Do not verify upstream server SSL/T
  --key-size KEY_SIZE   TLS key size for certificates and C

Client Replay:
  --client-replay PATH, -C PATH
                        Replay client requests from a saved

Server Replay:
  --server-replay PATH, -S PATH
                        Replay server responses from a save
  --no-server-replay-kill-extra
  --server-replay-kill-extra
                        Kill extra requests during replay.
  --no-server-replay-nopop
  --server-replay-nopop
                        Don't remove flows from server repl
  --no-server-replay-refresh
  --server-replay-refresh
                        Refresh server replay responses by
                        expiration.

Replacements:
  --replacements PATTERN, -R PATTERN
                        Replacement patterns of the form "/
                        multiple times.

Set Headers:
  --setheaders PATTERN, -H PATTERN
                        Header set pattern of the form "/pa
                        times.
```

mitmproxy --help

```
□ mitmproxy --help
usage: mitmproxy [options]

optional arguments:
  -h, --help            show this help message and exit
  --version             show version number and exit
  --options             Show all options and their default
  --commands            Show all commands and their signatu
  --set option[=value]  Set an option. When the value is or
                        and sequences are emptied. Boolean
  -q, --quiet           Quiet.
  -v, --verbose         Increase log verbosity.
  --mode MODE, -m MODE  Mode can be "regular", "transparent
                        SPEC is host specification in the t
  --no-anticache
  --anticache           Strip out request headers that migh
  --no-showhost
  --showhost            Use the Host header to construct UR
  --rfile PATH, -r PATH
                        Read flows from file.
  --scripts SCRIPT, -s SCRIPT
                        Execute a script. May be passed mul
  --stickycookie FILTER
                        Set sticky cookie filter. Matched a
  --stickyauth FILTER   Set sticky auth filter. Matched aga
  --save-stream-file PATH, -w PATH
                        Stream flows to file as they arrive
  --no-anticomp
  --anticomp            Try to convince servers to send us
  --console-layout {horizontal,single,vertical}
                        Console layout.
  --no-console-layout-headers
  --console-layout-headers
                        Show layout component headers

Proxy Options:
  --listen-host HOST    Address to bind proxy to.
  --listen-port PORT, -p PORT
                        Proxy service port.
  --no-server, -n
  --server              Start a proxy server. Enabled by de
  --ignore-hosts HOST   Ignore host and forward all traffic
                        (range), not the hostname. In regul
                        value is interpreted as a regular e
  --allow-hosts HOST    Opposite of --ignore-hosts. May be
  --tcp-hosts HOST      Generic TCP SSL proxy mode for all
                        The communication contents are prin
  --upstream-auth USER:PASS
                        Add HTTP Basic authentication to up
  --proxyauth SPEC      Require proxy authentication. Forma
```

```
                        htpasswd file, or "ldap[s]:url_serv
  --no-rawtcp
  --rawtcp              Enable/disable experimental raw TCP
                        match tcp_hosts. The heuristic is v
  --no-http2
  --http2               Enable/disable HTTP/2 support. HTTP

SSL:
  --certs SPEC          SSL certificates of the form "[doma
                        file at path is a certificate in PE
                        the conf dir is used. The PEM file
                        entry. May be passed multiple times
  --no-ssl-insecure
  --ssl-insecure, -k    Do not verify upstream server SSL/T
  --key-size KEY_SIZE   TLS key size for certificates and C

Client Replay:
  --client-replay PATH, -C PATH
                        Replay client requests from a saved

Server Replay:
  --server-replay PATH, -S PATH
                        Replay server responses from a save
  --no-server-replay-kill-extra
  --server-replay-kill-extra
                        Kill extra requests during replay.
  --no-server-replay-nopop
  --server-replay-nopop
                        Don't remove flows from server repl
  --no-server-replay-refresh
  --server-replay-refresh
                        Refresh server replay responses by
                        expiration.

Replacements:
  --replacements PATTERN, -R PATTERN
                        Replacement patterns of the form "/
                        multiple times.

Set Headers:
  --setheaders PATTERN, -H PATTERN
                        Header set pattern of the form "/pa
                        times.

Filters:
  See help in mitmproxy for filter expression syntax.

  --intercept FILTER    Intercept filter expression.
  --view-filter FILTER  Limit the view to matching flows.
```

mitmweb --help

```
□ mitmweb --help
usage: mitmweb [options]

optional arguments:
  -h, --help            show this help message and exit
  --version             show version number and exit
  --options             Show all options and their default
  --commands            Show all commands and their signatu
  --set option[=value]  Set an option. When the value is or
                        and sequences are emptied. Boolean
  -q, --quiet           Quiet.
  -v, --verbose         Increase log verbosity.
  --mode MODE, -m MODE  Mode can be "regular", "transparent
                        SPEC is host specification in the t
  --no-anticache
  --anticache           Strip out request headers that migh
  --no-showhost
  --showhost            Use the Host header to construct UR
  --rfile PATH, -r PATH
                        Read flows from file.
  --scripts SCRIPT, -s SCRIPT
                        Execute a script. May be passed mul
  --stickycookie FILTER
                        Set sticky cookie filter. Matched a
  --stickyauth FILTER   Set sticky auth filter. Matched aga
  --save-stream-file PATH, -w PATH
                        Stream flows to file as they arrive
  --no-anticomp
  --anticomp            Try to convince servers to send us

Mitmweb:
  --no-web-open-browser
  --web-open-browser    Start a browser.
  --web-port PORT       Web UI port.
  --web-iface INTERFACE
                        Web UI interface.

Proxy Options:
  --listen-host HOST    Address to bind proxy to.
  --listen-port PORT, -p PORT
                        Proxy service port.
  --no-server, -n
  --server              Start a proxy server. Enabled by de
  --ignore-hosts HOST   Ignore host and forward all traffic
                        (range), not the hostname. In regul
                        value is interpreted as a regular e
  --allow-hosts HOST    Opposite of --ignore-hosts. May be
  --tcp-hosts HOST      Generic TCP SSL proxy mode for all
                        The communication contents are prin
  --upstream-auth USER:PASS
```

```
                        Add HTTP Basic authentication to up
  --proxyauth SPEC      Require proxy authentication. Forma
                        htpasswd file, or "ldap[s]:url_serv
  --no-rawtcp
  --rawtcp              Enable/disable experimental raw TCP
                        match tcp_hosts. The heuristic is v
  --no-http2
  --http2               Enable/disable HTTP/2 support. HTTP

SSL:
  --certs SPEC          SSL certificates of the form "[doma
                        file at path is a certificate in PE
                        the conf dir is used. The PEM file
                        entry. May be passed multiple times
  --no-ssl-insecure
  --ssl-insecure, -k    Do not verify upstream server SSL/T
  --key-size KEY_SIZE   TLS key size for certificates and C

Client Replay:
  --client-replay PATH, -C PATH
                        Replay client requests from a saved

Server Replay:
  --server-replay PATH, -S PATH
                        Replay server responses from a save
  --no-server-replay-kill-extra
  --server-replay-kill-extra
                        Kill extra requests during replay.
  --no-server-replay-nopop
  --server-replay-nopop
                        Don't remove flows from server repl
  --no-server-replay-refresh
  --server-replay-refresh
                        Refresh server replay responses by
                        expiration.

Replacements:
  --replacements PATTERN, -R PATTERN
                        Replacement patterns of the form "/
                        multiple times.

Set Headers:
  --setheaders PATTERN, -H PATTERN
                        Header set pattern of the form "/pa
                        times.

Filters:
  See help in mitmproxy for filter expression syntax.

  --intercept FILTER    Intercept filter expression.
```

参考资料

- 【已解决】Mac中安装Mitmdump和启动服务
- 【基本解决】Mac中mitmdump运行命令报错：in script py No module named yaml
- 【未解决】windows中pip安装mitmproxy报错： build _openssl.c error C2065 X509_V_FLAG_CB_ISSUER_CHECK undeclared identifier
- 【未解决】windows中pip install mitmproxy失败：ERROR Could not build wheels for cryptography which use PEP 517 and cannot be installed directly
- 【已解决】iPhone8P中安装mitmproxy的CA的ssl证书
- 【已解决】给iPhone添加mitmproxy的mitmdump代理用于保存抓包链接到文件
- 【记录】给安卓手机中安装mitmproxy代理的SSL证书
- 【记录】给自动抓包工具的安卓手机设置mitmproxy代理用于能抓包到链接地址
- 【已解决】安卓手机小米9中安装mitmproxy的SSL代理证书
- 【无需解决】小米9中WLAN或WAPI证书中找不到mitmproxy的SSL的pem证书文件
- 【无法解决】小米9中用ES文件管理器安装pem证书
- 【无法解决】红米Note8Pro中用微信或小米浏览器下载mitmproxy的SSL代理证书
- 【已解决】红米Note8Pro中用QQ浏览器下载mitmproxy的Android的SSL代理证书
- 【已解决】红米10X安卓手机中无法下载mitmproxy的证书文件
- 【已解决】给安卓手机ViVo的iQOO U1x下载和安装mitmproxy的SSL代理证书
- 【已解决】安卓手机Vivo的iQOO U1x中手动安装mitmproxy-ca-cert.pem证书文件
- 【已解决】安卓手机Vivo的iQOO U1x中点击安装mitmproxy的pem证书报错：未找到证书文件
- 【未解决】给安卓手机Vivo的iQOO U1x初始化mitmdump的代理环境
- 【已解决】给VMWare中macOS中抓包项目开启mitmdump代理
- 【已解决】红米Note8Pro中去下载mitmproxy证书提示：if you can see this, traffic is not passing through mitmproxy
- 【已解决】windows中用PyInstaller打包mitmdump的Python脚本为exe
- 【已解决】自动抓包平台化：Python调用命令行启动mitmproxy代理
- 【已解决】用自动处理任务脚本启动自动测试工具测试自动化安卓游戏
- 【已解决】Mac中用Python检测mitmdump进程状态和杀死原有进程

- 【已解决】Python中实现检测mitmdump进程服务的状态
- 【已解决】mitmproxy代理报错：Cannot establish TLS with 443 sni None TlsException Cannot validate certificate hostname without SNI
- 【无法解决】安卓游戏加了代理后支付页面时mitmdump报错：TlsException SSL handshake error Error SSL routines ssl3_read_bytes sslv3 alert certificate unknown
- 【未解决】windows中用mitmproxy无法抓包部分http付费链接
- 【未解决】安卓抓包mitmproxy报错：TlsException SSL handshake Error routines ssl3_get_record wrong version number
- 【无法解决】Mac中mitmdump通过-s加载python脚本时指定Python版本
- 【已解决】mac中Python2和Python3都已安装了yaml但mitmdump -s加载python脚本中导入yaml还是报错
- 【已解决】Mac中让mitmdump解析python脚本不用自己内置Python而是用系统Python
- 【已解决】Mac中运行mitmdump再次报错：Failed to import yaml
- 【已解决】Mac中mitmdump运行命令报错：in script py No module named yaml
- 【已解决】自动化测试安卓游戏烈焰龙城：从主页到带支付的真正支付页面
- 【已解决】自动化测试安卓游戏烈焰龙城：优化是否是支付页面以及点击支付出现支付弹框的逻辑
- 【已解决】给VMWare中macOS中抓包项目开启mitmdump代理
- 【已解决】提取自动抓包工具中的mitmdump自动保存代理抓包出来的url链接保存到文件
-
- Android Security: SSL Pinning. Using SSL in an Android app is easy… | by Matthew Dolan | Medium
- Bypassing Certificate Pinning on Android for fun and profit | by Felipe Lima | Medium
- Bypassing SSL Pinning on Android via Reverse Engineering.pdf
- https://dl.packetstormsecurity.net/papers/general/android-sslpinning.pdf
- mitmproxy/tls_passthrough.py at master · mitmproxy/mitmproxy
- Mitmproxy教程 - zha0gongz1 - 博客园