SYNACKTIV

CaptainCredz

Password Spraying in 2025

2025/07/02

Password spraying

What?

- **Password spraying:** few passwords, many users → *today's topic*
- ~~**Brute-force:** few users, many passwords~~ → *out of scope for today*

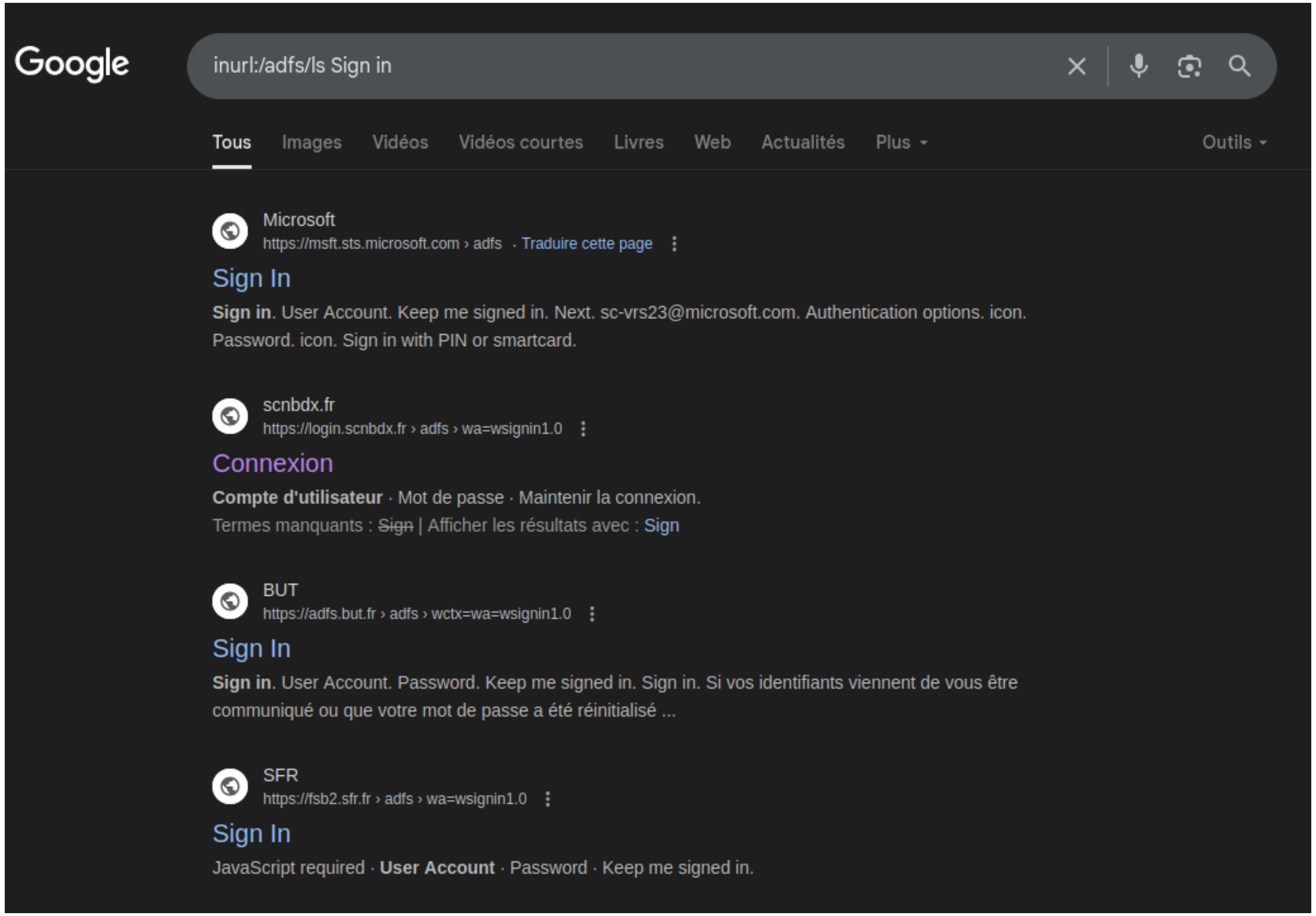
Password spraying

Why?

- **People are lazy!** On a >10k employees company, `<Company>2025!` might work
- **Companies migrate to cloud** & encourage remote work
- → often there is a company **authentication portal on the internet**
  - Microsoft SSO
  - Okta
  - Citrix
  - ADFS
  - Jira
  - Keycloak
  - …

Password spraying

Why?



inurl:/adfs/ls Sign in

Microsoft
https://msft.sts.microsoft.com › adfs · Traduire cette page

Sign In

Sign in. User Account. Keep me signed in. Next. sc-vrs23@microsoft.com. Authentication options. icon. Password. icon. Sign in with PIN or smartcard.

scnbdx.fr
https://login.scnbdx.fr › adfs › wa=wsignin1.0

Connexion

Compte d'utilisateur · Mot de passe · Maintenir la connexion.
Termes manquants : ~~Sign~~ | Afficher les résultats avec : Sign

BUT
https://adfs.but.fr › adfs › wctx=wa=wsignin1.0

Sign In

Sign in. User Account. Password. Keep me signed in. Sign in. Si vos identifiants viennent de vous être communiqué ou que votre mot de passe a été réinitialisé ...

SFR
https://fsb2.sfr.fr › adfs › wa=wsignin1.0

Sign In

JavaScript required · **User Account** · Password · Keep me signed in.

🙈🙈🙈

Password spraying

How?

- **Crawl the web:** Look for email addresses, employees names, …
    - LinkedIn
    - RocketReach
    - Data breaches
    - …
- **Create a small list of probable passwords**
    - `<Company>2025`
    - `<Company>2025!`
    - `Password123`
    - `<OfficeLocation>2025`
- **Start spraying!**

Flagged!

OH NO LA POLIZIA
POLIZIA

Flagged!

- **Why?**
  - **Many auth failure**
  - From the **same IP address**
  - In a **short time frame**
- **So what?**
  - Auth providers **start lying** (auth fails even with the correct password)
  - A success will be flagged as **suspicious**
  - **MFA** will probably be prompted on success
  - An **alert** will be raised and the **account locked** by the blue team

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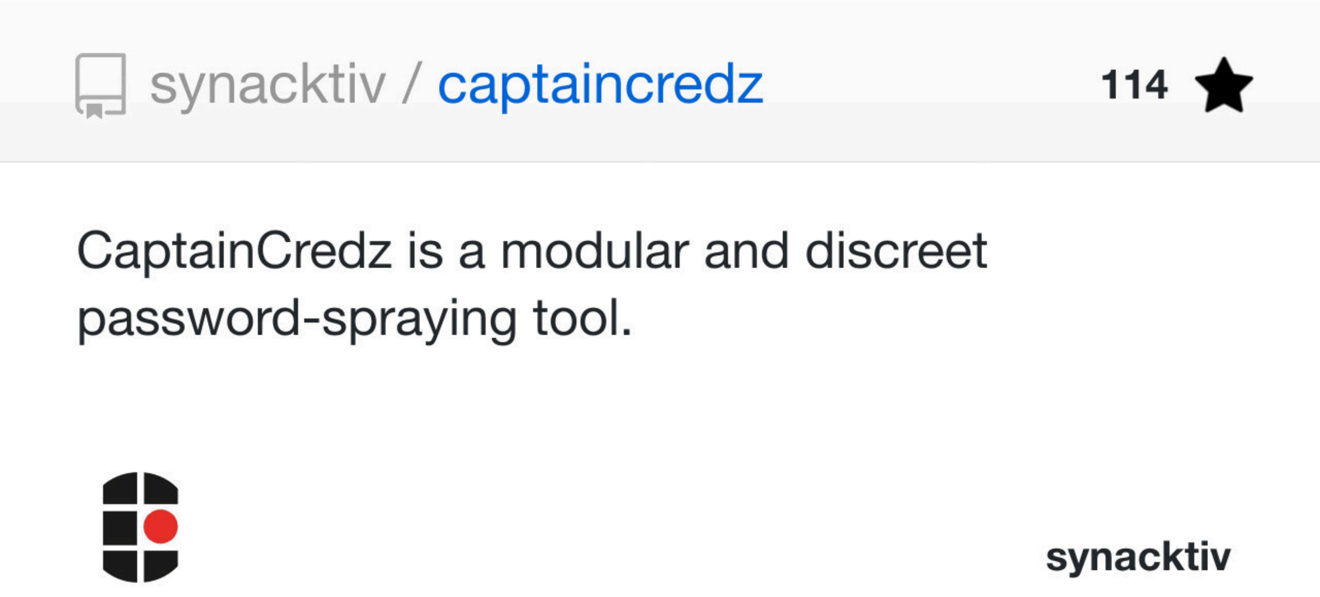
…to the rescue!



synacktiv / captaincredz 114 ★

CaptainCredz is a modular and discreet password-spraying tool.

https://github.com/synacktiv/captaincredz

CaptainCredz

Spraying engine

- **Fork from https://github.com/knavesec/CredMaster** (for various reasons)
- **Smart timings**
  - More attempts on mornings when users log in legitimately
  - Slowly ramp up the cadence over the week
  - Be dead silent on week-ends
  - …
- **Can combine specific `user:password` lists and generic passwords**
- **Has a cache**
- ***Has a cool progress bar*** 😎

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Modular

- **Relies on *plugins*** (code specific to the auth portal)
- **Anyone can implement a new *plugin*** in 3 functions: `validate()`, `testconnect()`, `test_authenticate()`
- **Can trigger specific code (called *post-actions*) depending on the attempt's result**
  - Display cookies
  - Send a Slack notification
  - …

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Example run

```
{
  "plugins" : [{
    "name": "adfs",
    "args": { "url": "http://adfs.company.com/" },
    "proxy": null,
    "useragentfile": "useragents.lst",
    "req_timeout": 60
  }],

  "post_actions": {
    "display_cookies": { "trigger":["success"] }
  },

  "userfile" : "users.lst",
  "passwordfile" : "passwords.lst",
  "userpassfile" : "userpass.lst",

  "jitter" : 600,
  "delay_req" : 25,
  "delay_user" : 7200,
}
```

```
$ python3 captaincredz.py --config config.json
```

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Key takeaways

- **Delays depend on your target's size, habits and timezone**
  - Be patient
  - Try not to deviate *too much* from usual activity
  - How much is *too much*? Currently analyzing many Azure sign-in logs, stay tuned
- **Have a look at synacktiv/IPspinner to evade IP-based detection**

- **Was it worth the struggle? Yes!**
- **Multiple successes in redteam engagements** offering an initial access :)

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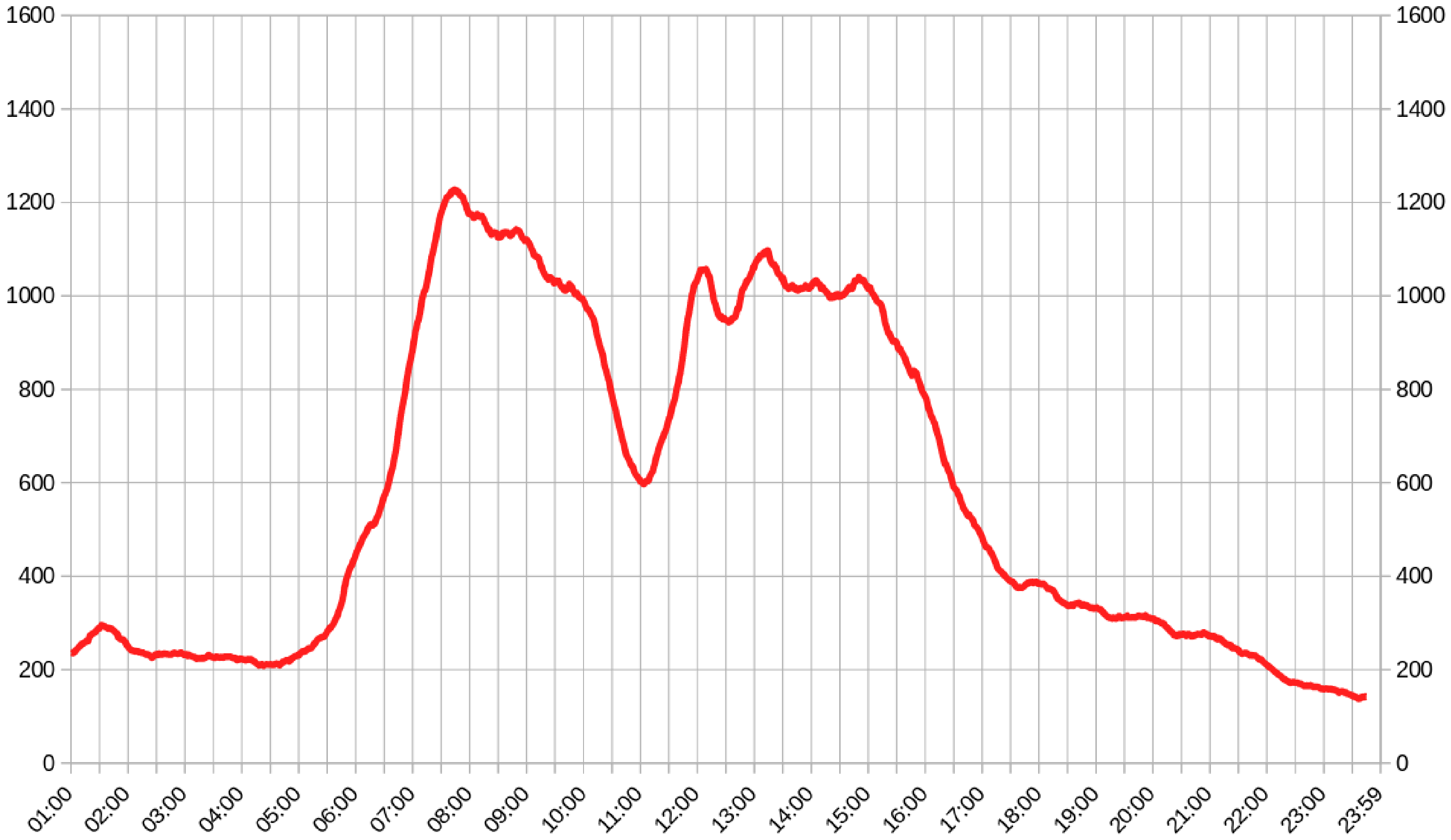
Sign-in tendencies throughout a day



How to defend?

- **Use strong passwords**
  - Ban common words
  - Encourage the use of password managers
- **Or just don't use them!**
  - Yubikeys, mTLS, Passkeys, …
- **Enforce multi-factor authentication**
- **Monitor and correlate authentication logs**

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