



# Cyber Situational Awareness Tools

## A New Perspective of Password Auditing

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# Today's agenda



Introduction



Motivation



Areas of Focus &  
Relevant Tools



Conclusions



# Introduction



Severe security breaches **continue** and get more focused  
> Theft of personal information and identities took centre stage



**Human aspect** plays a key role  
> Attackers rely on **human error** to gain access to systems



One of the **main vulnerabilities** that attackers still exploit to obtain unauthorised access  
> Weak passwords & password management



Password **audits** are essential  
> A future without passwords? Long term  
> Identify authentication weaknesses  
> Enhance SA as to organization's security level




**Informed decisions** driven by password auditing results  
> Design custom training activities & tools



Limited evaluation timeframe





When processing requests to establish and change memorized secrets, verifiers SHALL **compare** the prospective secrets **against a list** that contains **values known** to be commonly-used, **expected or compromised**

## NIST SP 800-63-3 Digital Identity Guidelines

2017

# Password auditing tools

Areas of focus

Password  
strength  
meters

Design new password auditing tools,  
assisting users optimizing the password  
cracking process

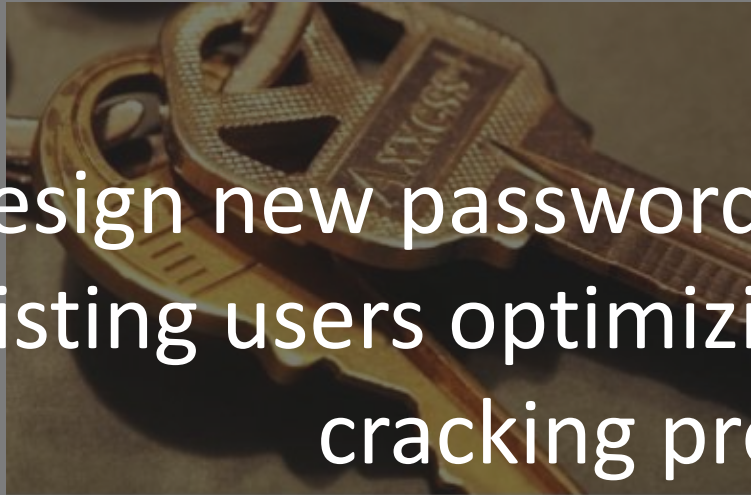
Analyze  
strength

Promising  
but not  
always  
accurate

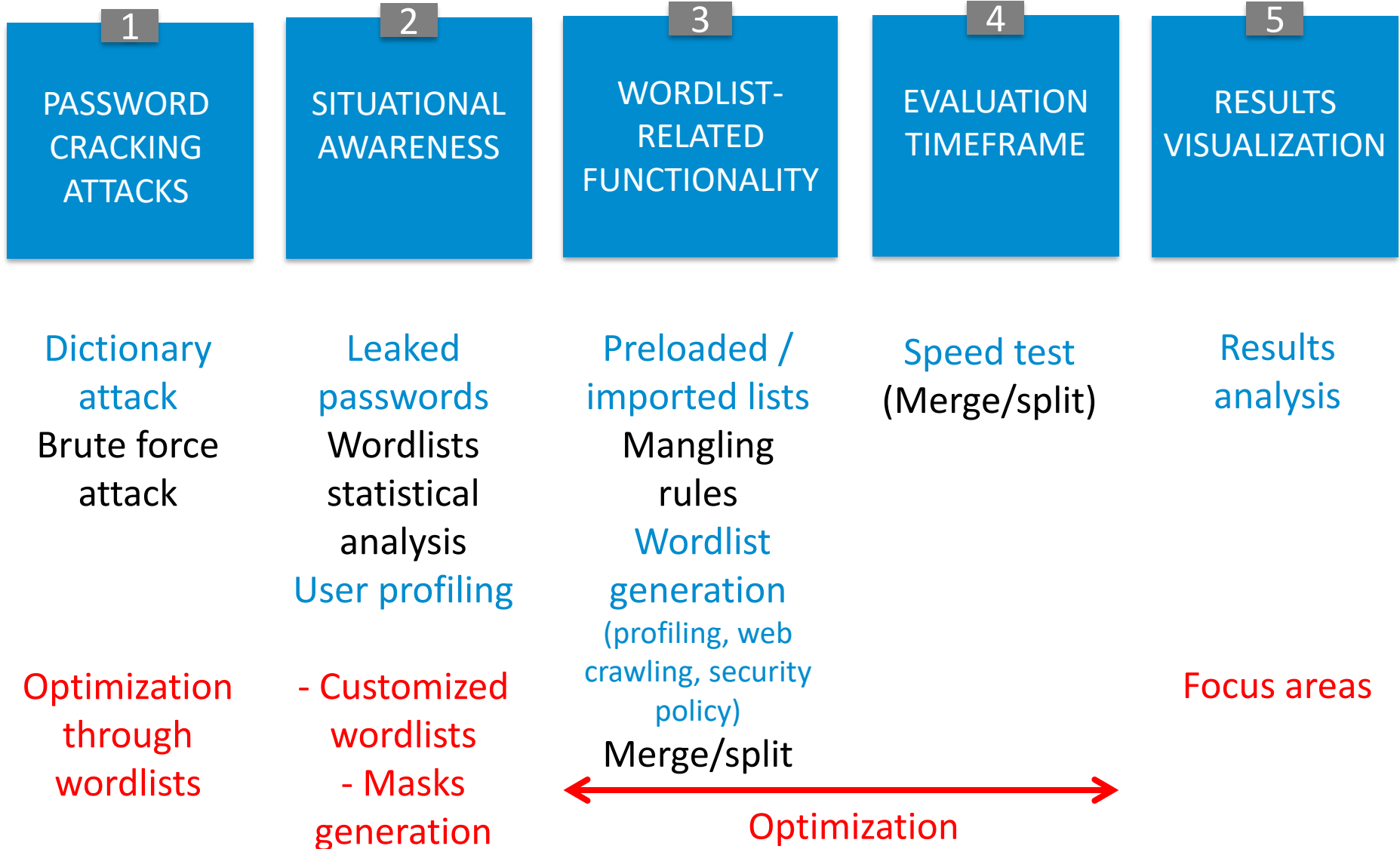
Focus:  
the  
password  
attack

Password  
cracking

Expert  
knowledge  
to  
configure  
tools

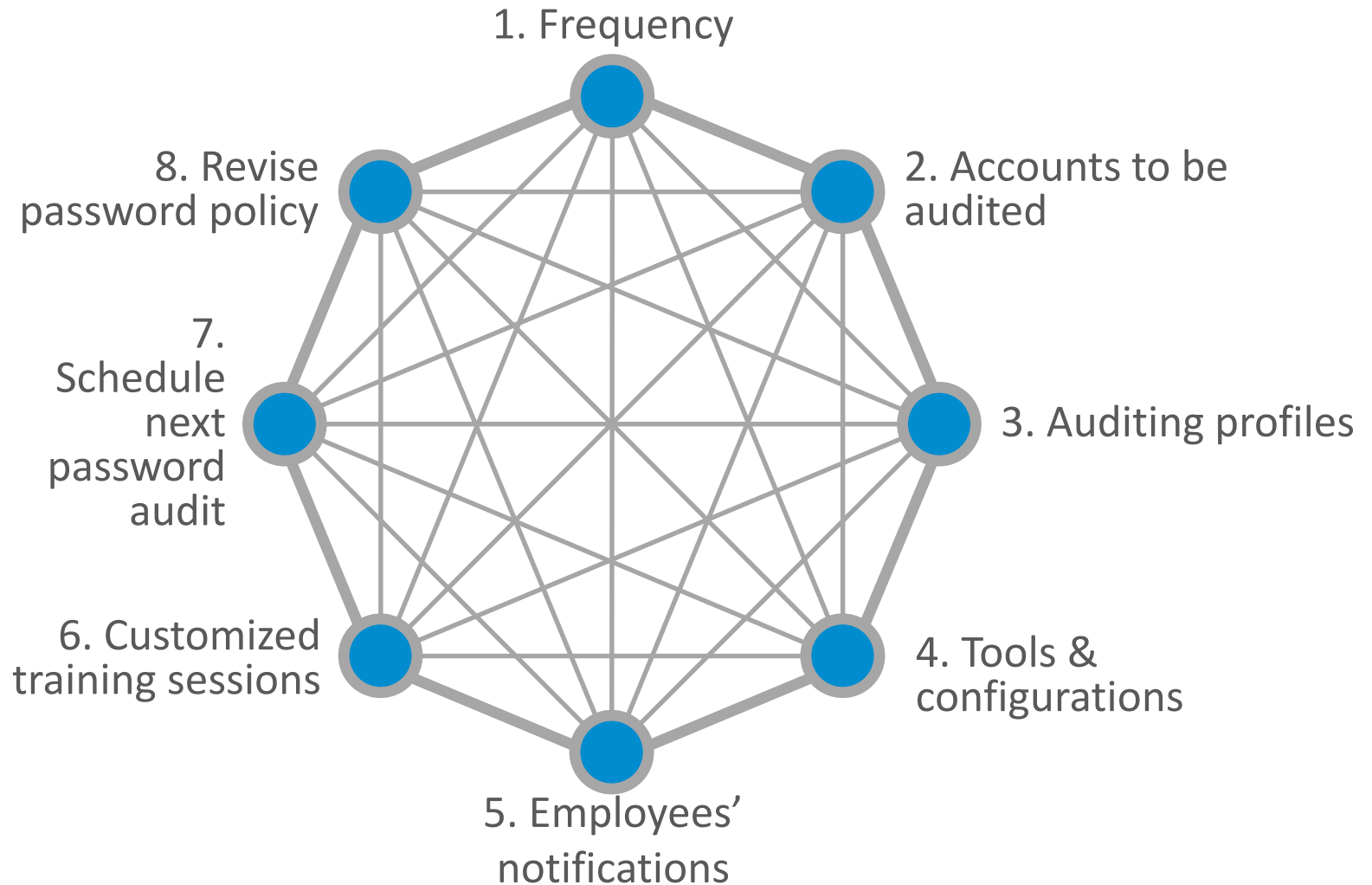


# Proposed functionality



# Password auditing policy

Proposed elements





# Password auditing toolkits

## Ultimate Password Awareness Toolkit

UPAT The Ultimate Password Awareness Toolkit

Home | Configure | Import Wordlist | Generate Wordlist | Wordlists Toolkit | Analyze Wordlist | Speed Test | Attack | New Password

Which action do you want to perform?

uclan

- 1 uclan
- 2 UCLan
- 3 Cyprus
- 4 Officer
- 5 Student
- 6 School
- 7 Administrative
- 8 Support
- 9 Business
- 10 Staff
- 11 Marketing
- 12 Professional
- 13 Academic
- 14 Research
- 15 Admissions
- 16 Coordinator
- 17 Library
- 18 Apply
- 19 Vacancies
- 20 Larnaka
- 21 International
- 22 Information
- 23 Recruitment
- 24 Assistant
- 25 Accounting
- 26 Seminars
- 27 Entry
- 28 Requirements
- 29 Testimonials
- 30 Accommodation
- 31 Living
- 32 Erasmus
- 33 Management
- 34 Sciences
- 35 Competition
- 36 Development
- 37 Senior
- 38 Welfare

Information

DISCLAIMER: U

UPAT The Ultimate Password Awareness Toolkit

Home | Configure | Import Wordlist | Generate Wordlist | Wordlists Toolkit | Analyze Wordlist | Speed Test | Attack | New Password

Web Based (CeWL) | Based on Saved Document (Wyd) | Based on User Profiling (CUPP) | Brute-force List based on Charset (Crunch)

Settings

URL:

User agent to send:

Min. world length:  Spider depth:   Include the meta data

HTTP Authentication

Auth type:

User:

Password:

Keep the downloaded file

Write the output to file:

Show the count for each word found

Verbose

Run CeWL

Output

```
11:28:47 | ruby cewl.rb --ua 'Googlebot' --min_word_length 4 --depth 0 --keep --write '/home/pj/Documents/Dictionaryes/uclan' --verbose http://www.uclan.ac.cy/en/uclan-cyprus/administrative-staff/
CeWL 5.2 (Some Chaos) Robin Wood (robin@digil.ninja) (https://digil.ninja/)
Starting at http://www.uclan.ac.cy/en/uclan-cyprus/administrative-staff/
Visiting: http://www.uclan.ac.cy/en/uclan-cyprus/administrative-staff/, got response code 200
Attribute text found:
UCLan Cyprus UCLan Cyprus UCLan Cyprus Search UCLan Cyprus UCLan Cyprus UCLan Cyprus Home Like us on Facebook

Writing words to file
CeWL is running...
```

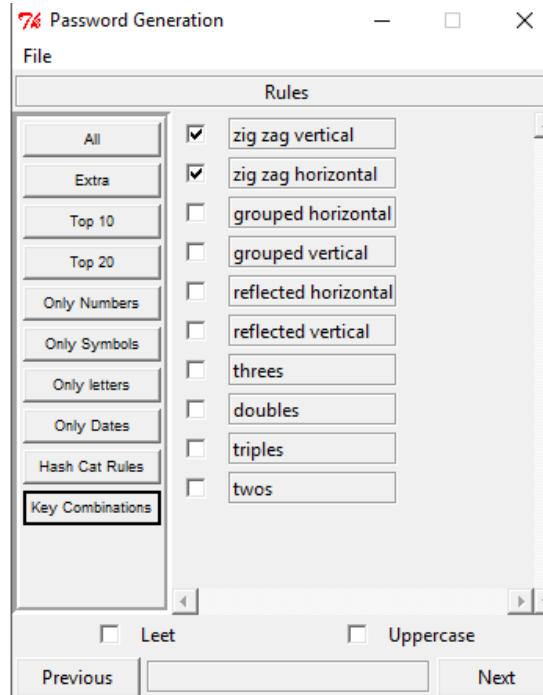
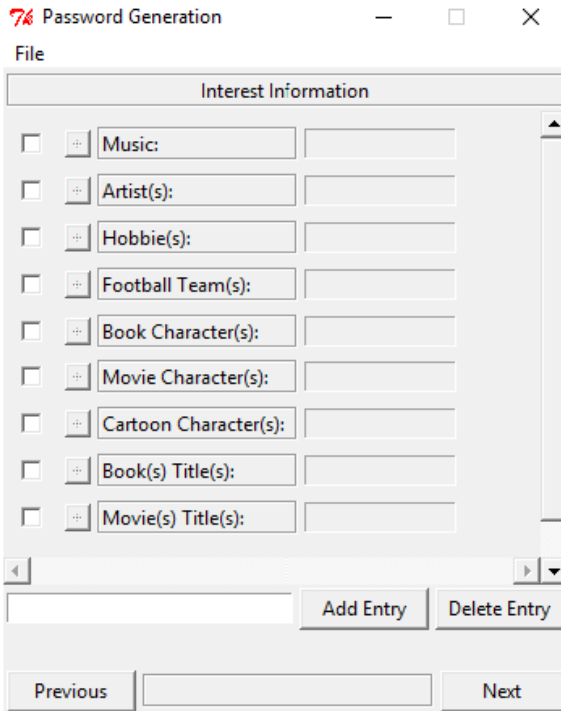
Information

More info when going over a tip icon...

Any actions and or activities related to the material contained within this application is solely your responsibility. The misuse of the tools launched from this application can result in criminal charges brought against the persons in question. The author of UPAT will not be held responsible in the event any criminal charges be brought against any individuals misusing the tools to break the law.

# Password auditing toolkits

## Password Generation Toolkit



# Conclusions



Businesses need to be able to **catch up** with the ever evolving cyber threat landscape



Companies need to **invest** in cyber security capabilities / tools development



Password auditing should be **part** of an organization's **cyber defence strategy**, it can protect from cyber attacks



Improve situational awareness, take **informed decisions** and decrease the risk of compromise

LOOK AHEAD

Q&A

