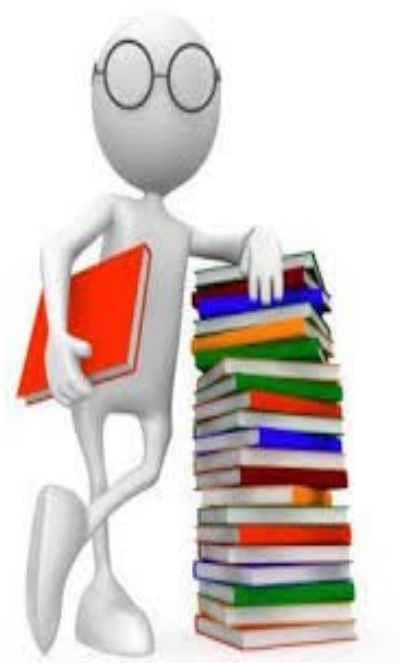


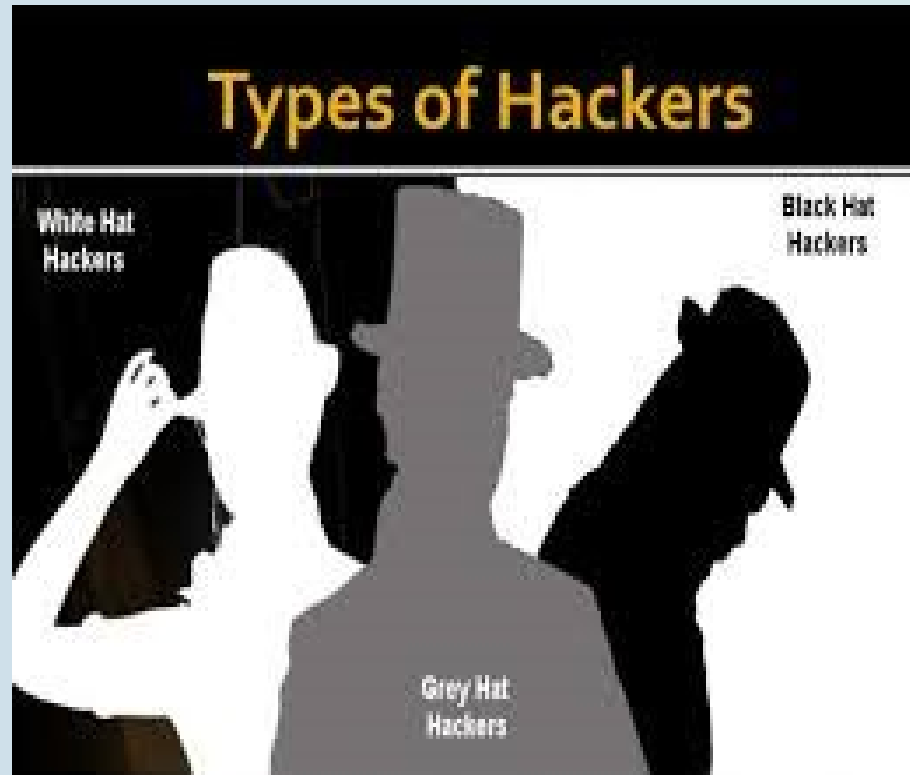
# מבוא להאקינג



# נושאי הלימוד



- האקרים – סוגי האקרים
- מתודולוגיות תקיפה של האקרים
- כלי האקינג על קצה המזלג
  - SHODAN
  - Mac Spoofing Attack
  - WIRESHARK – (רחרחנים)
  - KALI LINUX
  - Google hack
  - פריצת סיסמאות



Black Hat



White Hat




Grey Hat



## Black Hat





מבצע חדירות לרשתות, ולמחשבים על מנת:

להשיג את מטרות מסוימות: 

מטרות כלכליות – וירוסי כופרה 

מטרות פוליטיות – ארגון אנונימוס 

פעולות נקם – ביצוע פעולות טרור 

יצר ונדליזם – להרוס, לשבש סתם בשביל הכיף 

יצר אתגרי – הפריצה מבחינתו זה הוכחת יכולת טכנולוגית 

## פעולותיהם הם עבירה על החוק

# סוגי האקרים

## White Hat נקרא גם "מאבטח מידע"



מבצע בדיקות לרשתות, ולמחשבים על מנת:

לשפר רמת האבטחה במערכות רשתות ומחשבים

למצוא פרצות ולהתריע עליהן בקרב האחראים

לבצע פעולות בדיקת חדירות בארגונים (PEN TEST)


להגן בפני אנשי הכובע השחור (צבא: מגן סייבר)


יצר אתגרי – איתור הפירצה מבחינתו זה הוכחת יכולת טכנולוגית





## Grey Hat

כוונתו לא לגמרי ברורה שכן הוא לא מזיק אך גם לא מסייע

מטרתם היא לרוב למידת הטכנולוגיות והאתגר של ההתנסות בהן. 

חוקר מערכות ותוכנות, מחפש חולשות ובעיות. 

כאשר הוא מוצא פרצה הוא לא פוגע אך גם לא תורם (מדווח וכדומה) 

יכול להפוך ל-WHITE HAT או ל-BLACK HAT תלוי במניעים שלו. 

# סוגי האקרים

## Script kiddies



משתמשים בתוכנות קיימות (סקריפטים) כדי לעשות דברים רעים

מטרתם בעיקר לגרום לנזקים

הם לא מתוחכמים ולא מבינים במחשבים

הופכים את עצמם למטרה, כי ברגע שהם מנסים לפרוץ לא בחכמה הם חושפים את עצמם.

הסקריפטים שהם מורידים על מנת לתקוף לפעמים מכילים וירוסים וכך הם הופכים לקורבן

**איזה כובע הם חובשים??**

# Script kiddies

אבל הם נראים כך....



הם רוצים להראות כך...





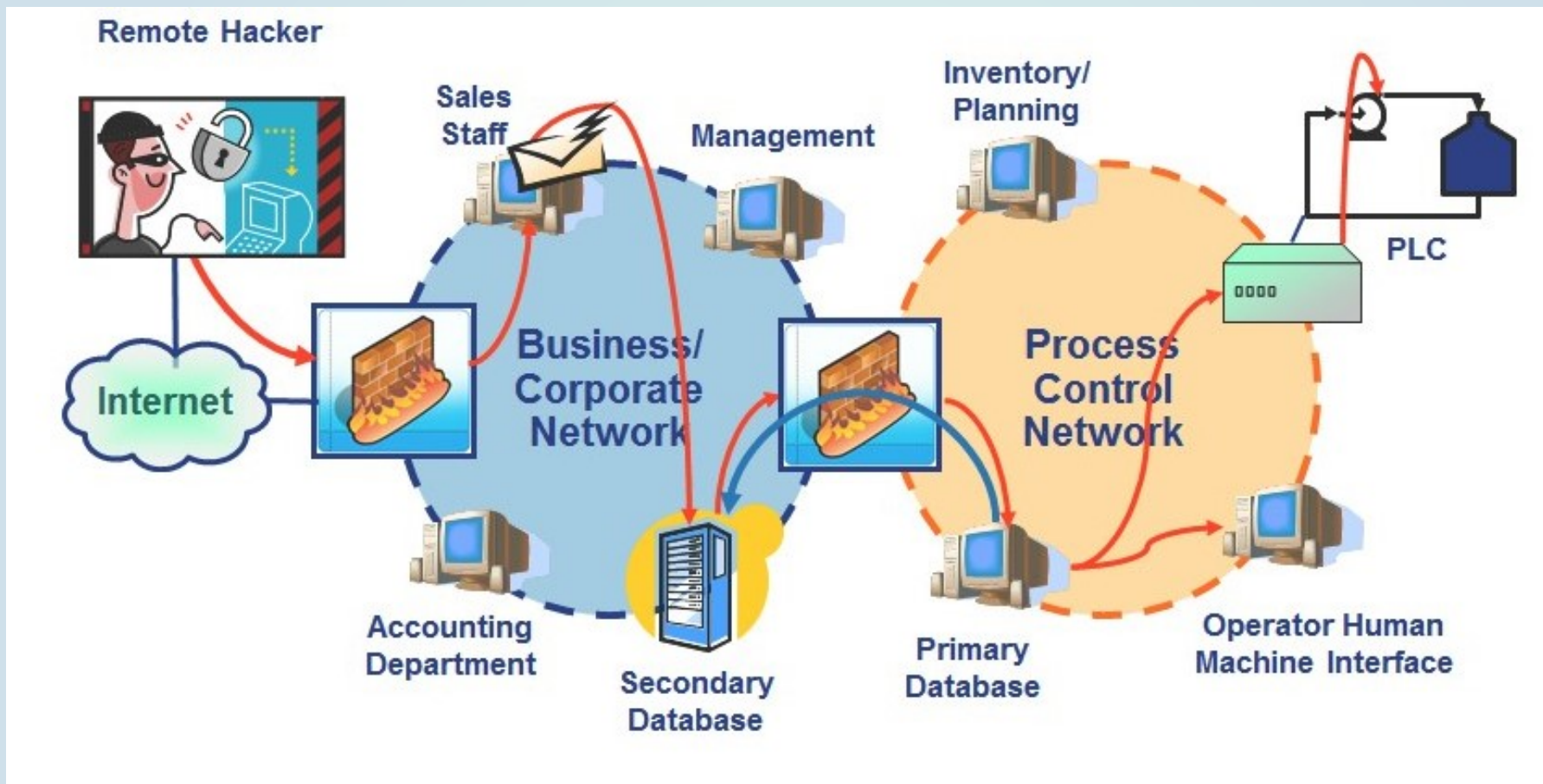
# כיצד פועל ההאקר ? (כובע שחור)

## מתודולוגית תקיפה אופיינית



- ❑ חיפוש אחר יעד לתקיפה / איתור היעד לתקיפה
- ❑ איתור חולשה מסויימת (Vulnerability)
- ❑ ניצול החולשה – הורדת תכנה (Exploit) או כתיבת התכנה
- ❑ ביסוס אחיזה – למשל התקנת Service שעולה עם מערכת ההפעלה
- ❑ ביצוע "תנועה צידית" (Lateral Movement) – מעבר ממחשב למחשב
- ❑ טישטוש עקבות – מחיקת לוגים שנרשמים ב- Event Viewer

## מבט כללי על רשת טיפוסית במפעל



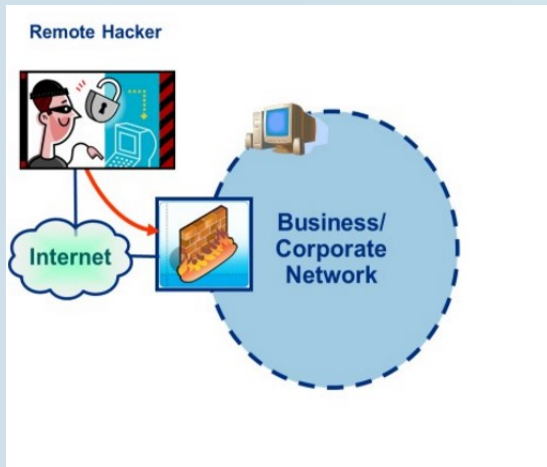
# מתודולוגיית התקיפה – חדירה ראשונית

חדירה ראשונית:

פעולות לגיטימיות (שימוש בפורט 25 המשמש לשליחת מיילים לארגון ופתוח בחומת האש) שימוש ב-

SOCIAL ENGINEERING  
SPEAR PHISHING EMAIL

- התוקף שולח קובץ POWERPOINT המכיל מצגת
- בתוך המצגת מוחדרת פיסת קוד שמכילה MALEWARE
- הוירוס פותח תקשורת החוצה אל מחשב התוקף שמאפשרת לו להשתלט על המחשב הנפגע



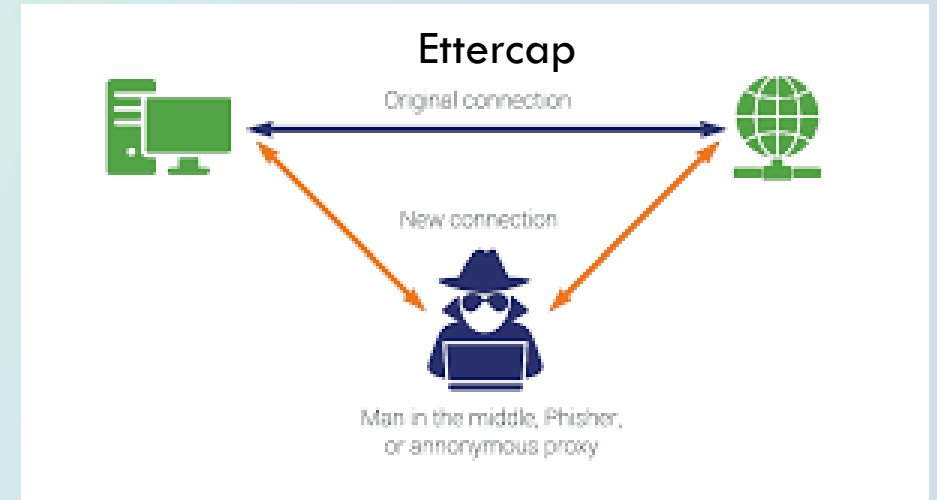
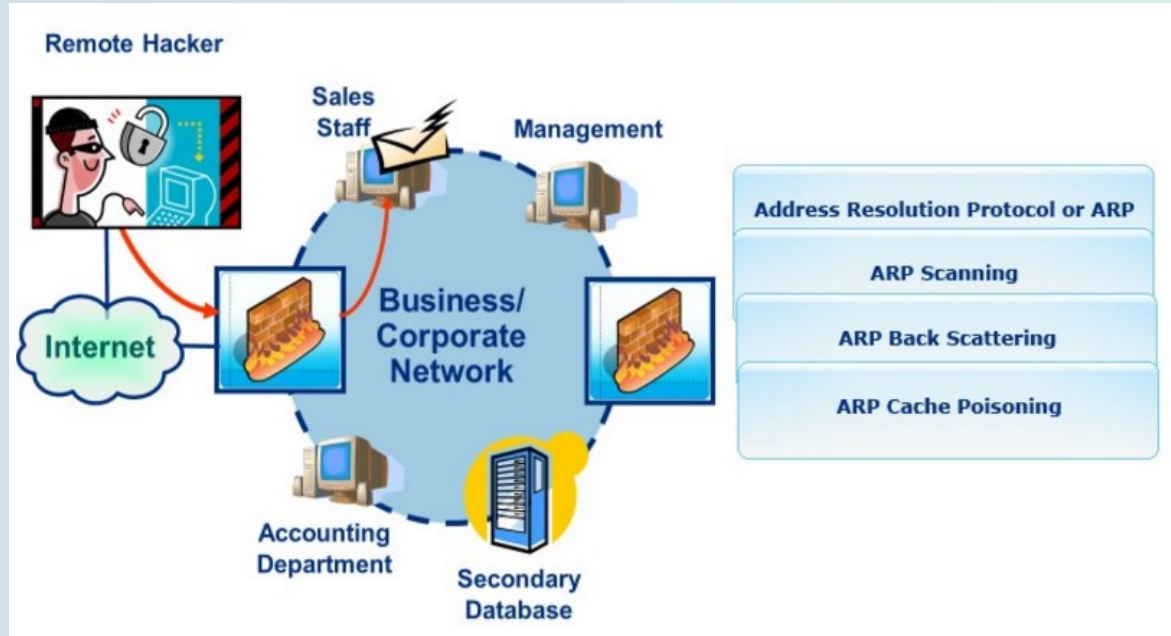
## וקטורי התקיפה אפשריים לתקיפה מסוג זה:

- משלוח מייל לארגון
- הורדת קובץ מהאינטרנט
- שיטוט באתר שנפל קורבן

# מתודולגית התקיפה – שליטה על התקשורת ברשת

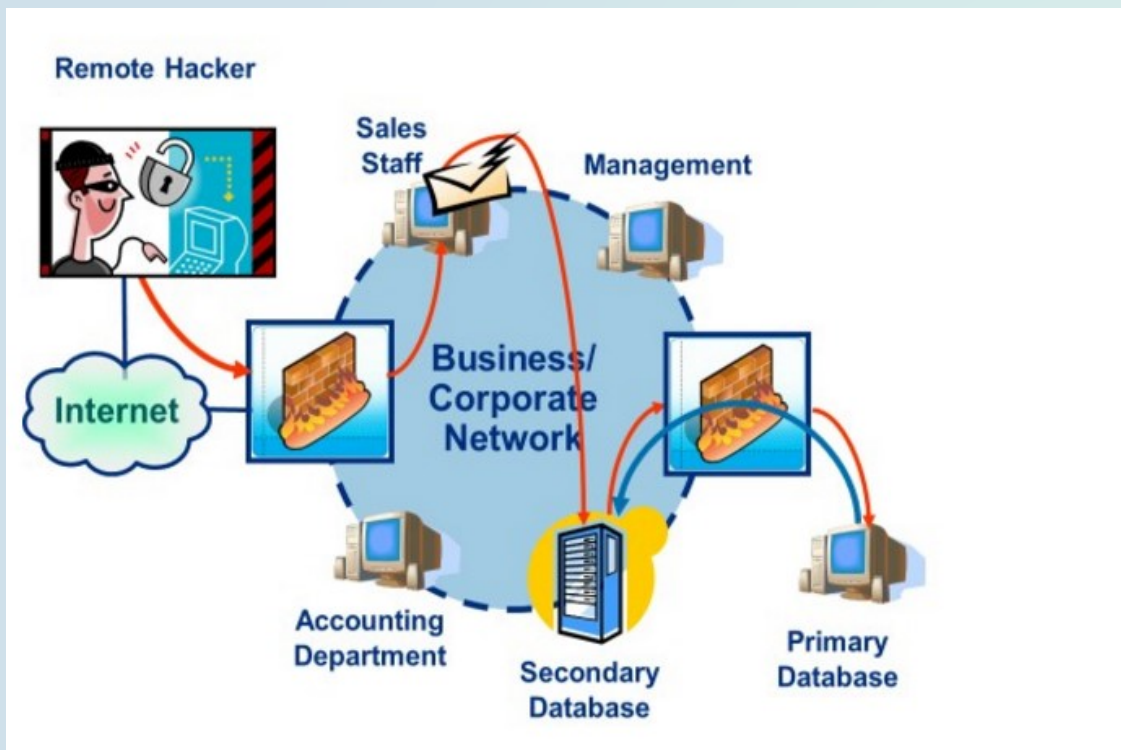
לאחר החדירה

- התוקף מבצע LATERAL MOVEMENT בתוך רשת הארגון באמצעות ARP
- שינוי ב-ARP שמחזיקים המחשבים בארגון יעביר את כל התעבורה למחשב הנשלט (הופך אותו ל DEFAULT GATEWAY).
- בשלב זה השיג התוקף שליטה על התעבורה של התקשורת בארגון.



# מתודולגיית התקיפה – השתלטות על בסיס הנתונים

- התוקף מבצע מעקב אחרי תעבורת התקשורת בין שרתי בסיס הנתונים.
- התוקף מזריק קוד עויין אל שרת ה-DB ברשת ה-ICS

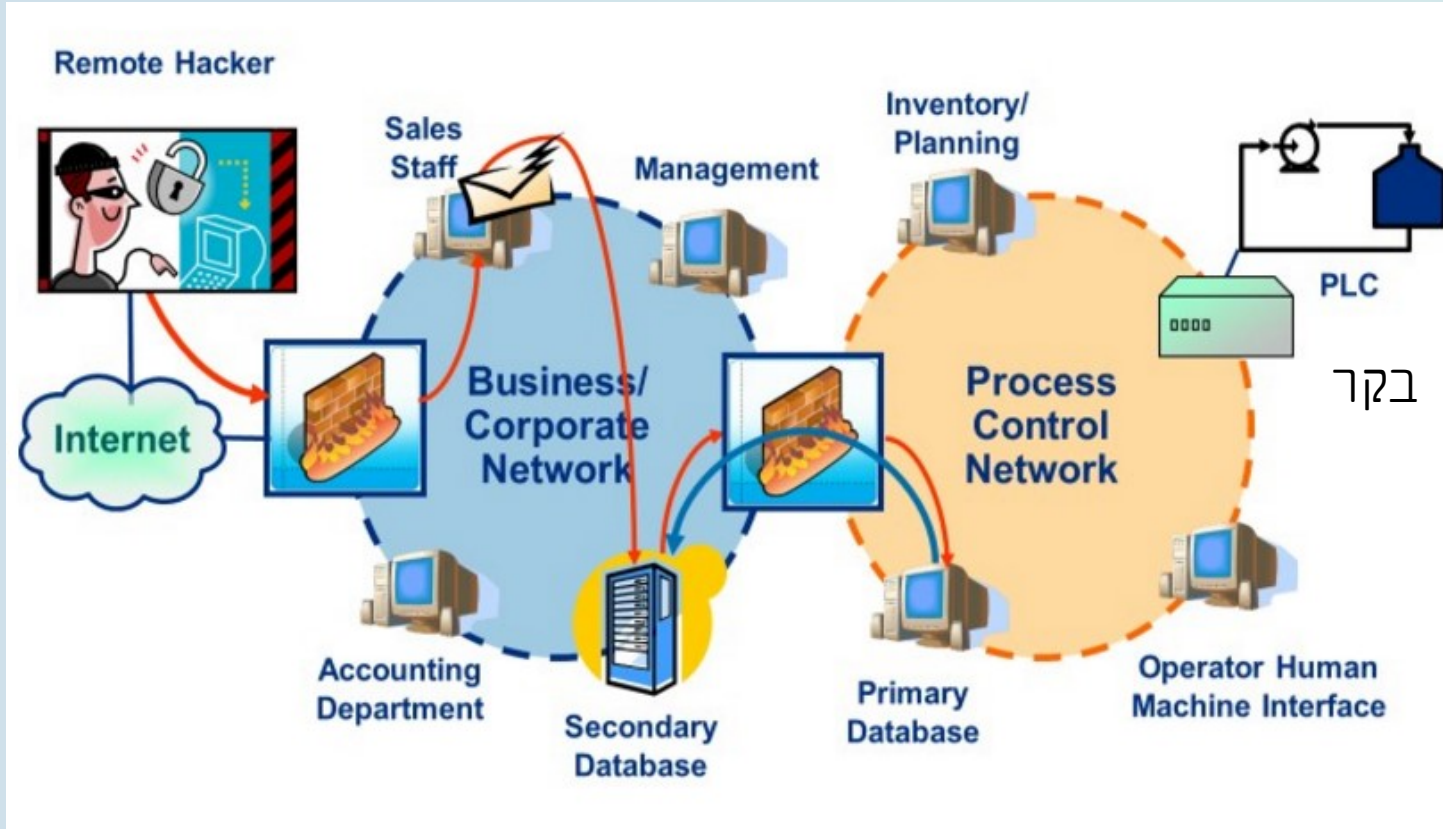


SQL = TCP 1433

ORACLE = TCP 1521

# מתודולגית התקיפה – השתלטות על רשת ICS

התוקף משלים את ההשתלטות  
משיג שליטה ברשת ה-ICS



חומרים  
מסוכנים



MODBUS= TCP 502

# השתלטות על רשת בקרה במפעל – משמעויות

התוקף מסוגל לבצע את הפעילויות הבאות:

- העלאת הורדת לחצים לערכים לא סבירים עד לדליפה ולעיתים פיצוץ צנרת או מיכלים
- שינוי ערכי קירור וחימום והגעה לטמפרטורות קיצוניות
- סגירת / פתיחת ברזים לא מבוקרת עד כדי גלישת חומר מסוכן
- העלאת / הורדת רמת pH במתקני טיהור שפכים – הוצאת שפכים ברמת רעילות מסוכנת
- כל פעילות אחרת שקשורה בתפעול מערך בקרה תעשייתית במפעל (ICS).



התוצאה: פגיעה בבריאות הציבור ובסביבה

## SHODAN

- אתר שעלה לאוויר בסוף 2009
- מנוע חיפוש שמקטלג רכיבים שמחוברים לאינטרנט כמו רכיבי ICS (בקרים, אביזרים מערכות סקאדה), מצלמות.
- כלי מצויין להאקרים לביצוע מעקב אחרי רכיבים שפתוחים לעולם ומספק להם נתונים על מיקום, כתובות IP פורטים פתוחים, מערכות הפעלה וכדומה.

### Example

SHODAN, which was put in service toward the end of 2009, is a search engine that catalogs all Internet facing devices including control systems. It is a great tool for performing reconnaissance, and as such, it has been called the "Google for hackers." It provides information that an attacker would find useful, including ports, hostname, country, server operating system, server version, and more. SHODAN stands for Sentient Hyper-Optimized Data Access Network.

On February 2011, a researcher was able to identify and easily access an ICS using information gleaned from SHODAN. There was minimum impact on business functionality because the researcher only "looked around." He reported the vulnerability, and ICS-CERT worked with the asset owner to secure the system.

Information from SHODAN was recognized by ICS-CERT as a potential vulnerability well before this incident. On October 28, 2010, ICS-CERT issued an alert, [ICS Alert 10 301-01, "Control System Internet Accessibility."](#)

### Summary of Recommendations:

- Placing all control systems assets behind firewalls, separated from the business network.
- Deploying secure remote access methods such as Virtual Private Networks (VPNs) for remote access.
- Removing, disabling, or renaming any default system accounts (where possible).
- Implementing account lockout policies to reduce the risk from brute forcing attempts.
- Implementing policies requiring the use of strong passwords.
- Monitoring the creation of administrator level accounts by third-party vendors.




<https://www.shodan.io/>




## Explore

Discover the Internet using search queries shared by

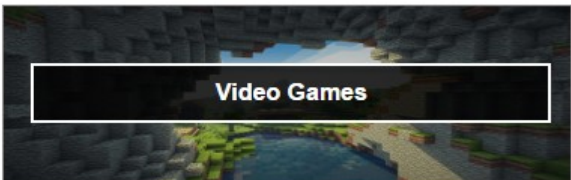
### Featured Categories



**Industrial Control Systems**



**Databases**



**Video Games**

### Top Voted

8,998

**Webcam**

best ip cam search I have found yet.

webcam
surveillance
cams
2010-03-15

3,476

**Cams**

admin admin

cam
webcam
2012-02-06

1,989

**Netcam**

Netcam

netcam
2012-01-13

1,173

**default password**


Finds results with "default password" in the ba...

router
default
password
2010-01-14

1,015


**dreambox**

Secure | <https://www.shodan.io/explore/category/industrial-control-systems>




## Industrial Control Systems

### Spotlight



**XZERES Wind Turbine**  
XZERES Wind designs & manufactures wind energy systems for small wind turbine market designed for powering homes farms or businesses with clean energy.

Explore



**PIPS Automated License Plate Reader**  
The PIPS AutoPlate Secure ALPR Access Control System catalogs all vehicles entering or exiting an access point to a site or facility.

Explore

### What Are They?

In a nutshell, industrial control systems (ICS) are computers that control the world around you. They're responsible for managing the air conditioning in your office, the turbines at a power plant, the lighting at the theatre or the robots at a factory.

### Common Terms

ICS	Industrial Control System
SCADA	Supervisory Control and Data Acquisition
PLC	Programmable Logic Controller
DCS	Distributed Control System
RTU	Remote Terminal Unit

### Protocols

The following protocols are some of the languages that the industrial control systems use to communicate across the Internet. Many of them were developed before the Internet became widely used which is why Internet-accessible ICS devices don't always require authentication - it isn't part of the protocol!



Modbus is a popular protocol for industrial control systems (ICS). It provides easy, raw access to the control system without requiring any authentication.

[Explore Modbus](#)



S7 (S7 Communication) is a Siemens proprietary protocol that runs between programmable logic controllers (PLCs) of the Siemens S7 family.

[Explore Siemens S7](#)



DNP3 (Distributed Network Protocol) is a set of communications protocols used between components in process automation systems. Its main use is in utilities such as electric and water companies.

[Explore DNP3](#)



The Fox protocol, developed as part of the Niagara framework from Tridium, is most commonly seen in building automation systems (offices, libraries, Universities, etc.)

[Explore Niagara Fox](#)



BACnet is a communications protocol for building automation and control networks. It was designed to allow communication of building automation and control systems for applications such as heating, air-conditioning, lighting, and fire detection systems.

[Explore BACnet](#)



EtherNet/IP was introduced in 2001 and is an industrial Ethernet network solution available for manufacturing automation.

[Explore EtherNet/IP](#)



Service Request Transport Protocol (GE-SRTP) protocol is developed by GE Intelligent Platforms (earlier GE Fanuc) for transfer of data from PLCs.

[Explore GE-SRTP](#)



The HART Communications Protocol (Highway Addressable Remote Transducer Protocol) is an early implementation of Fieldbus, a digital industrial automation protocol. Its most notable advantage is that it can communicate over legacy wiring.

[Explore HART-IP](#)



PCWorx is a protocol and program by Phoenix Contact used by a wide range of industries.

[Explore PCWorx](#)

The screenshot shows a web browser window with two tabs: 'index1' and 'translate - Google Search'. The browser's address bar is empty. The website content includes a clock showing 14:18:46, a yellow box with the text 'מאגר בית יואב', a green box with 'מספר סדרה יואב', and a yellow box with '5.900 meter'. There are also two green boxes with text: 'סמת פיקוד 24 וולט תקין' and 'תקין vac N.V.R סמתה 230'. A large watermark '@Unidentified\_TM' is visible across the center. In the foreground, the Bandicam application window is open, showing the 'Options' tab. The 'Output folder' is set to 'C:\Users\Administrator\Documents\Bandicam'. Other options include 'Bandicam window always on top', 'Start Bandicam minimized to tray', and 'Run Bandicam on Windows startup'. The 'Scheduled Recording' section shows 'There are no scheduled recordings.' and the 'Auto Complete Recording' section shows 'Disable'. The Bandicam interface also displays a timer at '00:00:00' and '0 bytes / 428.1GB'.



The screenshot shows a web browser window displaying a monitoring interface. A red circle highlights a pop-up window with the following information:

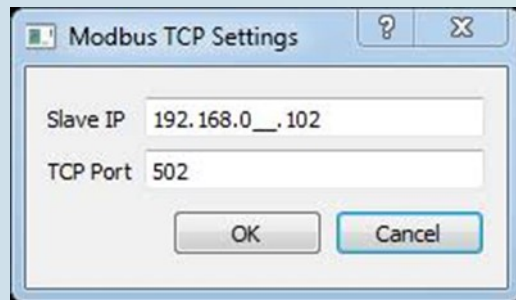
- IP Address: 91.135.106.243
- Country: Israel
- Organization: Telephone
- Ports: 80, 502
- View Host Details button

The dashboard itself contains several data points and gauges:

- Pressure gauge: 1.4 bar
- Flow gauge: 0 Kub/Hr
- Frequency gauge: 50 Hz
- Temperature gauge: 5.900 meter
- Various status indicators (green/red dots) and buttons for different components.

# פרוטוקול MODBUS הנפוץ בתעשייה

MODBUS נועד להעביר מידע מסנסורים ובקרים ופאנלים לוקאליים לניטור תעבורה פרוטוקול בסטנדרט תעשייתי לכן תומך במערכות תעשייתיות רבות ומיצרנים שונים הפרוטוקול הופיע לראשונה ב-1979 ופותח ע"י חברת MODICON (היום שניידר אלקטריק) בתחילתו תומך בתווק-RS232 (כבלים סריאלים), לאחר מכן ב-RS485 תוך שימוש בפרוטוקול TCP/IP כברירת מחדל עובד על TCP PORT 502



## החסרונות הגדולים של הפרוטוקול:

- ❖ אינו תומך בהזדהות (authentication)
- ❖ אינו תומך בהצפנה (encryption) – לכן יש להשתמש ב-VPN מוצפנים

# modbus

Shodan Developers Monitor View All...

SHODAN modbus Explore Pricing Enterprise Access

Exploits Maps Images

**TOTAL RESULTS**  
337

**TOP COUNTRIES**

Poland	116
United States	50
Greece	30
Sweden	19
Italy	19

**TOP SERVICES**

FTP	158
Telnet (Lantronix)	30
1883	29
8081	18
BACnet	7

**TOP ORGANIZATIONS**

Netia SA	106
Cosmote Mobile Telecommunications S.A.	21
Verizon Wireless	8
Telia	8
Vodafone Kabel Deutschland	5

**TOP PRODUCTS**

Mosquitto	31
Apache httpd	8
WindWeb	4
InfluxDB	4
Elastic	3

**New Service: Keep track of what you have connected to the Internet. Check out [Shodan Monitor](#)**

**82.143.147.168**  
h82-143-147-168-static.e-wro.net.pl  
Netia SA  
Added on 2020-07-12 05:19:58 GMT  
Poland, Wroclaw

220 Modbus-GPRS-Gateway FTP Server Ready  
530 Not logged in.  
502 Command not implemented  
211-Features:  
SIZE  
211 End

**46.233.128.2**  
Iren Energia S.p.a  
Added on 2020-07-12 08:11:28 GMT  
Italy, Turin

MODEM AES 44.00

Press Command Number

- 1) Lancia il Polling su I2C
- 2) Lancia il Polling su MBUS
- 3) Lancia il Polling su **MODBUS**
- 4) Valore lettura regolatore Siemens
- 5) Download applicazione
- 6) Download applicazione di test
- 7) ...
- 8) AUTODISCOVERY...

**166.254.93.217**  
217-sub-166-254-93.myvzw.com  
Verizon Wireless  
Added on 2020-07-12 10:46:37 GMT  
United States

Modbus/TCP to RTU Bridge  
MAC address 0000A3CB2866

Software version V3.3.25.0RCS (140113)

Press Enter for Setup Mode

**78.141.134.213**  
ip-78-141-134-213.dyn.luxdsl.pt.lu  
POST Luxembourg  
Added on 2020-07-12 11:42:38 GMT  
Luxembourg

0<\x02\x01\x00\x04\x06public\xa2/\x02\x04f\x01j\*\x02\x01\x00\x02\x01



shodan.io/search?query=admin+%2B+1234

SHODAN admin + 1234

Exploits Maps

TOTAL RESULTS  
**2,196**

TOP COUNTRIES

Ukraine	296
Taiwan	284
Poland	252
Russian Federation	206
United States	118

TOP SERVICES

HTTP	916
HTTP (8080)	738
Kerberos	153
Qconn	84
MongoDB	82

TOP ORGANIZATIONS

HiNet	243
Spoldzielnia Mieszkaniowa Polnoc	157
Digi Romania	31
ER-Telecom	28
Amazon.com	21

TOP OPERATING SYSTEMS

Linux 2.4.x	11
Linux 2.6.x	8

TOP PRODUCTS

GoAhead-Webs httpd	1,864
MongoDB	87

New Service: Keep track of what you have connected to the Internet. Check out **Shodan Monitor**

**178.165.8.190**  
178-165-8-190-kh.maxnet.ua  
**Maxnet Telecom**  
Added on 2020-07-12 11:38:17 GMT  
Ukraine, Kharkiv

HTTP/1.1 401 Unauthorized  
Server: GoAhead-Webs  
Date: Tue Jan 4 21:33:24 2011  
WWW-Authenticate: Basic realm="Default: admin/1234"  
Pragma: no-cache  
Cache-Control: no-cache  
Content-Type: text/html

**220.142.186.203**  
220-142-186-203.dynamic-ip.hinet.net  
**HiNet**  
Added on 2020-07-12 11:40:41 GMT  
Taiwan, Kaohsiung City

HTTP/1.1 401 Unauthorized  
Server: GoAhead-Webs  
Date: Thu Jul 7 04:41:07 2011  
WWW-Authenticate: Basic realm="Default: admin/1234"  
Pragma: no-cache  
Cache-Control: no-cache  
Content-Type: text/html

**195.196.231.140**  
InformationsTeknik i Norrbotten AB  
Added on 2020-07-12 10:50:14 GMT  
Sweden, Puolikasvaara

HTTP/1.1 401 Unauthorized  
Server: GoAhead-Webs  
Date: Sun Jul 12 11:50:20 2020  
WWW-Authenticate: Basic realm="Default: admin/1234"  
Pragma: no-cache  
Cache-Control: no-cache  
Content-Type: text/html

**86.110.38.18**  
86-110-38-18.levikom.ee  
**Levikom Eesti OU**  
Added on 2020-07-12 10:57:22 GMT  
Estonia, Kehtna

HTTP/1.1 401 Unauthorized  
Server: GoAhead-Webs  
Date: Wed Jul 4 17:57:32 2012  
WWW-Authenticate: Basic realm="Default: admin/1234"

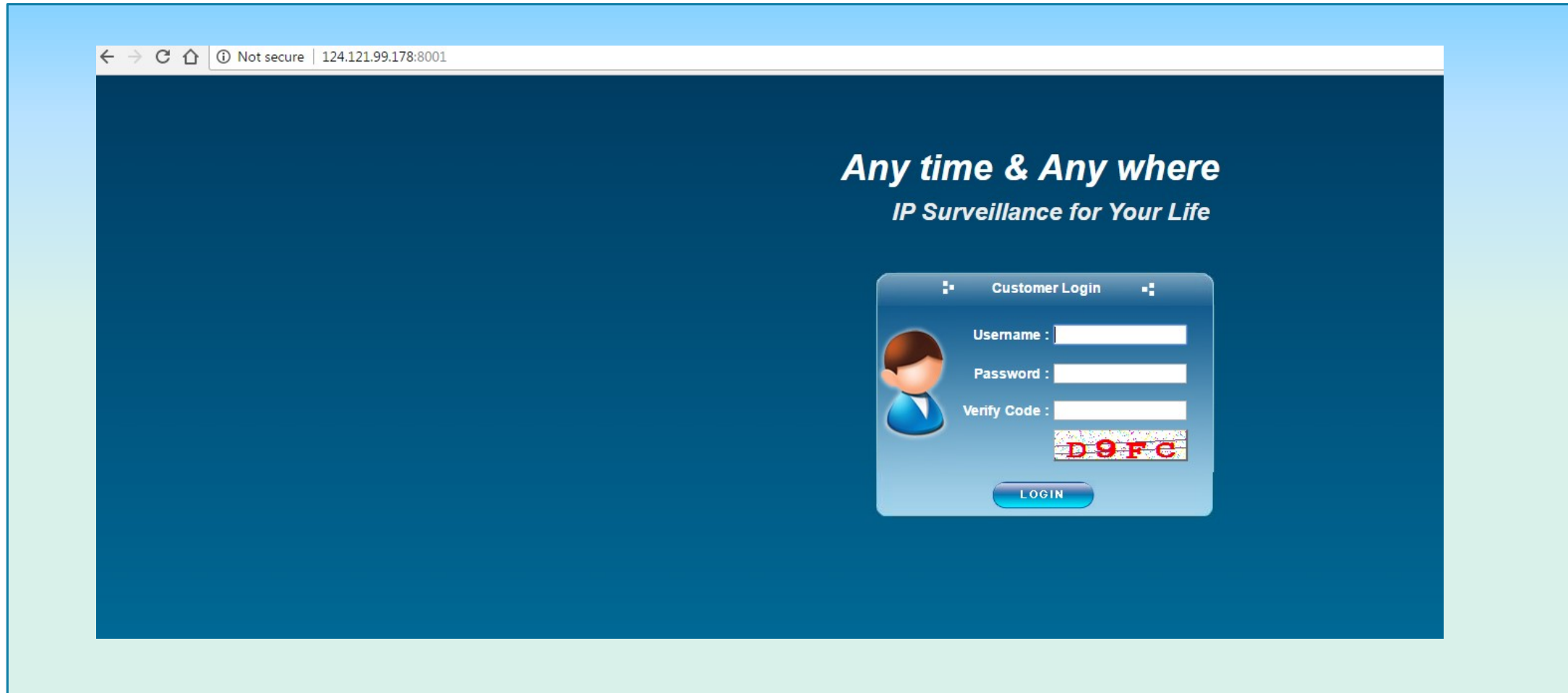


# מצלמות פתוחות עם משתמש וסיסמא ידועים

The screenshot displays a web application interface with a search bar at the top containing the terms 'webcam', 'surveillance', and 'cams'. The date '2010-03-15' is visible in the top right corner. Below the search bar, there are two main results:

- Result 1:** A dark-themed card with a red box containing the number '3,476'. The title is 'Cams' and the subtitle is 'admin admin'. Below the title are two buttons labeled 'cam' and 'webcam'. The date '2012-02-06' is in the bottom right corner. To the right of this card is a blue box with the number '1'.
- Result 2:** A light-themed card with an orange box containing the number '1,989'. The title is 'Netcam'. To the right of this card is a blue box with the number '2'.

# מצלמה פתוחה לעולם





## תוכנה שיודעת לראות מה עובר ברשת המחשבים

לדוגמא:

### WIRESHARK

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	10.16.72.53	239.255.255.250	SSDP	175	M-SEARCH * HTTP/1.1
2	0.460665	10.16.72.56	10.16.72.255	BROWSEFP	243	Local Master Announcement MININT-MKLFPAP, workstation, Serve
3	0.705331	10.16.72.62	239.255.255.250	SSDP	316	NOTIFY * HTTP/1.1
4	1.617156	10.16.72.51	192.168.174.80	TCP	92	52039 → 8080 [PSH, ACK] Seq=1 Ack=1 win=259 Len=38
5	1.738020	192.168.174.80	10.16.72.51	TCP	60	8080 → 52039 [ACK] Seq=1 Ack=39 win=65535 Len=0
6	1.802184	192.168.174.80	10.16.72.51	TCP	99	8080 → 52039 [PSH, ACK] Seq=1 Ack=39 win=65535 Len=45
7	1.892110	10.16.72.51	192.168.174.80	TCP	55	52285 → 8080 [ACK] Seq=1 Ack=1 win=876 Len=1
8	1.924422	192.168.174.80	10.16.72.51	TCP	60	8080 → 52285 [ACK] Seq=1 Ack=2 win=65535 Len=0
9	2.016788	10.16.72.51	192.168.174.80	TCP	54	52039 → 8080 [ACK] Seq=39 Ack=46 win=259 Len=0
10	2.626253	fe80::113a:681:868d	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1
11	3.510107	fe80::a1f2:bbc:c693	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1
12	3.711042	10.16.72.60	239.255.255.250	SSDP	316	NOTIFY * HTTP/1.1
13	5.635465	fe80::113a:681:868d	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1
14	5.705949	10.16.72.62	239.255.255.250	SSDP	316	NOTIFY * HTTP/1.1
15	6.511100	fe80::a1f2:bbc:c693	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1
16	6.513421	fe80::a1f2:bbc:c693	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1
17	6.515640	fe80::a1f2:bbc:c693	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1
18	6.527777	10.16.72.65	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1
19	7.522971	10.16.72.65	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1
20	8.524076	10.16.72.65	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1
21	8.667383	fe80::113a:681:868d	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1
22	8.709246	10.16.72.60	239.255.255.250	SSDP	316	NOTIFY * HTTP/1.1
23	8.733423	3comEuro_14:a1:01	Broadcast	ARP	60	Gratuitous ARP for 10.16.72.253 (Request)
24	9.510914	fe80::a1f2:bbc:c693	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1
25	9.524145	10.16.72.65	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1
26	9.714521	3comEuro_14:a1:01	Broadcast	ARP	60	Gratuitous ARP for 10.16.72.253 (Request)
27	10.582723	10.16.72.64	255.255.255.255	UDP	124	64914 → 1211 Len=82
28	10.706055	10.16.72.62	239.255.255.250	SSDP	316	NOTIFY * HTTP/1.1
29	11.232417	10.16.72.51	192.168.174.80	TCP	55	52181 → 8080 [ACK] Seq=1 Ack=1 win=260 Len=1
30	11.242490	192.168.174.80	10.16.72.51	TCP	60	8080 → 52181 [ACK] Seq=1 Ack=2 win=65535 Len=0
31	12.537167	10.16.72.51	192.168.174.80	TCP	54	52332 → 80 [RST, ACK] Seq=1 Ack=1 win=0 Len=0
32	12.552369	10.16.72.51	192.168.174.80	TCP	54	52338 → 8080 [FIN, ACK] Seq=1 Ack=1 win=258 Len=0
33	12.552587	10.16.72.51	192.168.174.80	TCP	54	52334 → 8080 [FIN, ACK] Seq=1 Ack=1 win=257 Len=0
34	12.552656	10.16.72.51	192.168.174.80	TCP	54	52333 → 80 [FIN, ACK] Seq=1 Ack=1 win=64314 Len=0
35	12.564292	192.168.174.80	10.16.72.51	TCP	60	8080 → 52338 [ACK] Seq=1 Ack=2 win=65535 Len=0
36	12.564411	192.168.174.80	10.16.72.51	TCP	60	8080 → 52338 [FIN, ACK] Seq=1 Ack=2 win=65535 Len=0
37	12.564442	10.16.72.51	192.168.174.80	TCP	54	52338 → 8080 [ACK] Seq=2 Ack=2 win=258 Len=0
38	12.565721	192.168.174.80	10.16.72.51	TCP	60	80 → 52333 [ACK] Seq=1 Ack=2 win=4312 Len=0
39	12.565839	192.168.174.80	10.16.72.51	TCP	60	8080 → 52334 [ACK] Seq=1 Ack=2 win=65535 Len=0
40	12.565864	192.168.174.80	10.16.72.51	TCP	60	80 → 52333 [FIN, ACK] Seq=1 Ack=2 win=4312 Len=0
41	12.565898	10.16.72.51	192.168.174.80	TCP	54	52333 → 80 [ACK] Seq=2 Ack=2 win=64314 Len=0
42	12.565984	192.168.174.80	10.16.72.51	TCP	60	8080 → 52334 [FIN, ACK] Seq=1 Ack=2 win=65535 Len=0
43	12.566017	10.16.72.51	192.168.174.80	TCP	54	52334 → 8080 [ACK] Seq=2 Ack=2 win=257 Len=0
44	12.636247	fe80::113a:681:868d	ff02::c	SSDP	208	M-SEARCH * HTTP/1.1



היה בעבר Back - Track

## KALI LINUX

כלי האזנה לתעבורת רשת  
כלי סריקת חורי אבטחה במערכות שונות  
כלי פיצוח סיסמאות  
כלי פריצת רשתות אלחוטיות  
כלים למתקפות שונות



<https://www.kali.org/releases/kali-linux-2020-1-release/>

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Kali Linux 2020.1 Release

## Kali Linux 2020.1 Release

January 28, 2020 g0tm1k Kali Linux Releases

We are here to kick off our first release of the decade, with Kali Linux 2020.1! Available for immediate download.

The following is a brief feature summary for this release:

- Non-Root by default
- Kali single installer image
- Kali NetHunter Rootless
- Improvements to theme & kali-undercover
- New tools

## Common TCP Ports

According to the Nmap classification, these are the most common TCP ports:

- ✓ 21 - FTP (File Transfer Protocol)
- ✓ 22 - SSH (Secure Shell)
- ✓ 23 - Telnet
- ✓ 25 - SMTP (Mail)
- ✓ 80 - HTTP (Web)
- ✓ 110 - POP3 (Mail)
- ✓ 143 - IMAP (Mail)
- ✓ 443 - HTTPS (Secure Web)
- ✓ 445 - SMB (Microsoft File Sharing)
- ✓ 3389 - RDP (Remote Desktop Protocol)

## Our TCP Port Scanner with Nmap

The **Full Scan** allows you to perform portscans with **custom parameters**, easily configured from the web interface:

- ✓ Specify custom TCP ports to scan (1-65535)
- ✓ Enable/disable service detection
- ✓ Enable/disable operating system detection
- ✓ Enable/disable host discovery
- ✓ Do Traceroute

המטרה:

מציאת שירות פתוח (פורט פתוח)

הכלי: NMAP

65,535 TCP Ports  
65,535 UDP Ports

## BRUTE FORCE - בעזרת תכנה שנקראת hydra נמצאת בחבילת ה-KALI LINUX

### Password Protection

This table illustrates maximum times for a brute force attack for passwords of 96 character complexity (upper and lower case, numbers, and special characters). If your passwords cannot be this complex, the amount of time would be greatly reduced.

The calculations are based on 96 to the power of the password characters. So a password of length 8 characters has  $96^8$  complexity or 7.2 quadrillion possible combinations. The table further shows 4 columns of brute force password processing attempts in units per second. The first column is 10 million per second, which is possible to do with a modern quad core processor. The last column is 76 billion per second, which is possible to do with a botnet. The table lists the maximum amount of time. It is possible to reduce this time using different password-cracking technologies such as dictionaries and look-up tables.

Number of Characters	Complexity ( $96^x$ )	QUAD CORE		BOT NET	
		10 Million / sec	100 Million / sec	76 Billion / sec	2.5 Quadrillion / sec
4	84.9 Million	8.49 seconds	< 1 second	< 1 second	< 1 second
6	782.8 Billion	21.7 hours	2.2 hours	10.3 seconds	< 1 second
7	75.1 Trillion	87 days	8.7 days	16.5 minutes	< 1 second
8	7.2 Quadrillion	22.9 years	2.3 years	1.1 days	2.9 seconds
9	692.5 Quadrillion	> 100 years	> 100 years	105.5 days	4.6 minutes

מכינים קובץ זאד וקוראים לו בשם : wordlist.txt  
הקובץ מכיל: שורות המכילות אותיות או מספרים שעשויים להיות בסיסמא



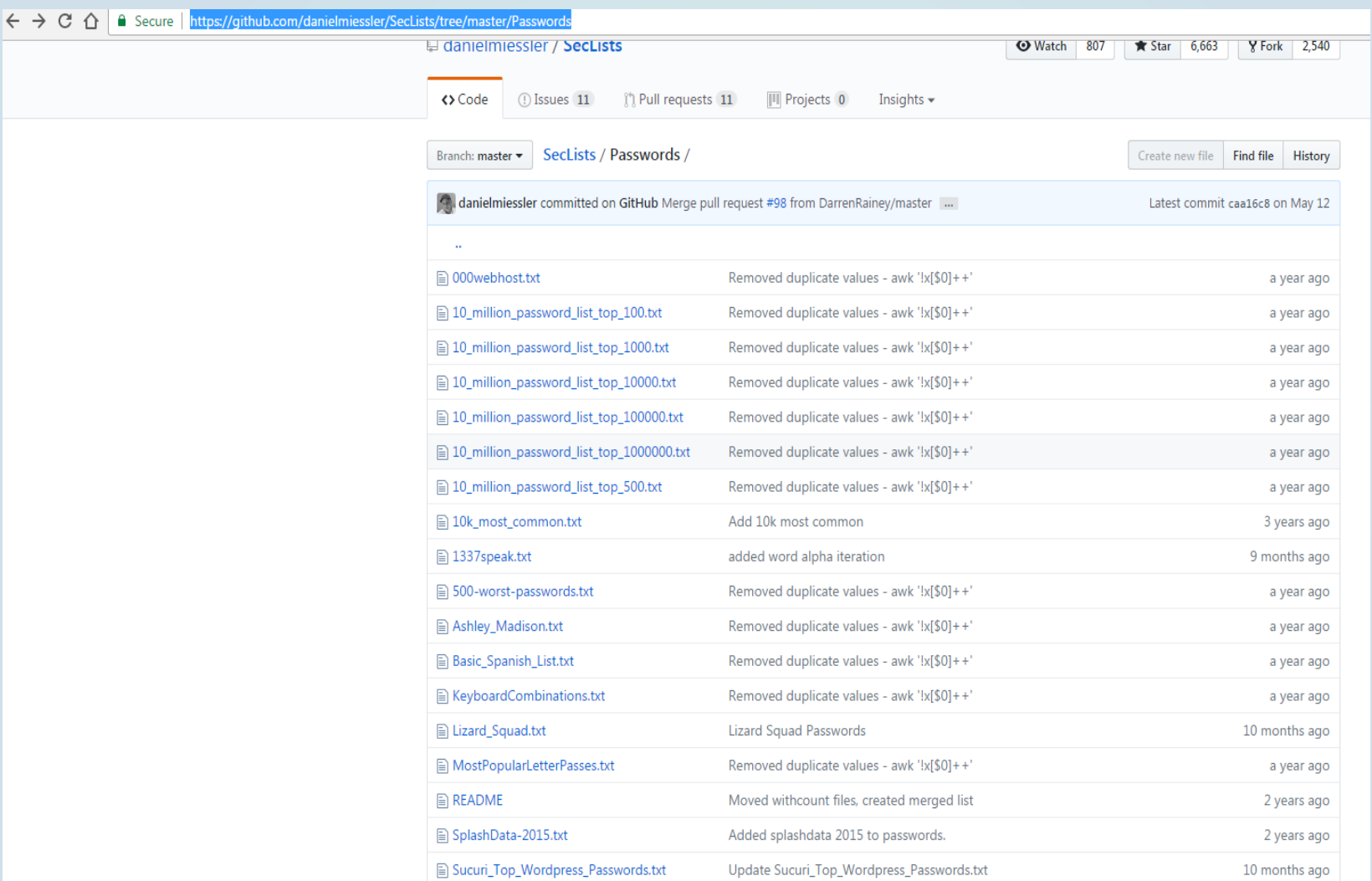
הנטיה הטבעית להכניס לסיסמא מאפיינים אישיים  
שם ומשפחה  
תאריך לידה  
שמות ילדים  
וכדומה

ישנם רשימות מוכנות ברשת שמכילות סיסמאות או קומבינציות שעשויות להביא לסיסמא :

<https://github.com/danielmiessler/SecLists/tree/master/Passwords>



# דוגמאות לקבצי סיסמאות מהרשת



Secure | <https://github.com/danielmiessler/SecLists/tree/master/Passwords>

danielmiessler / SecLists

Watch 807 Star 6,663 Fork 2,540

Code Issues 11 Pull requests 11 Projects 0 Insights

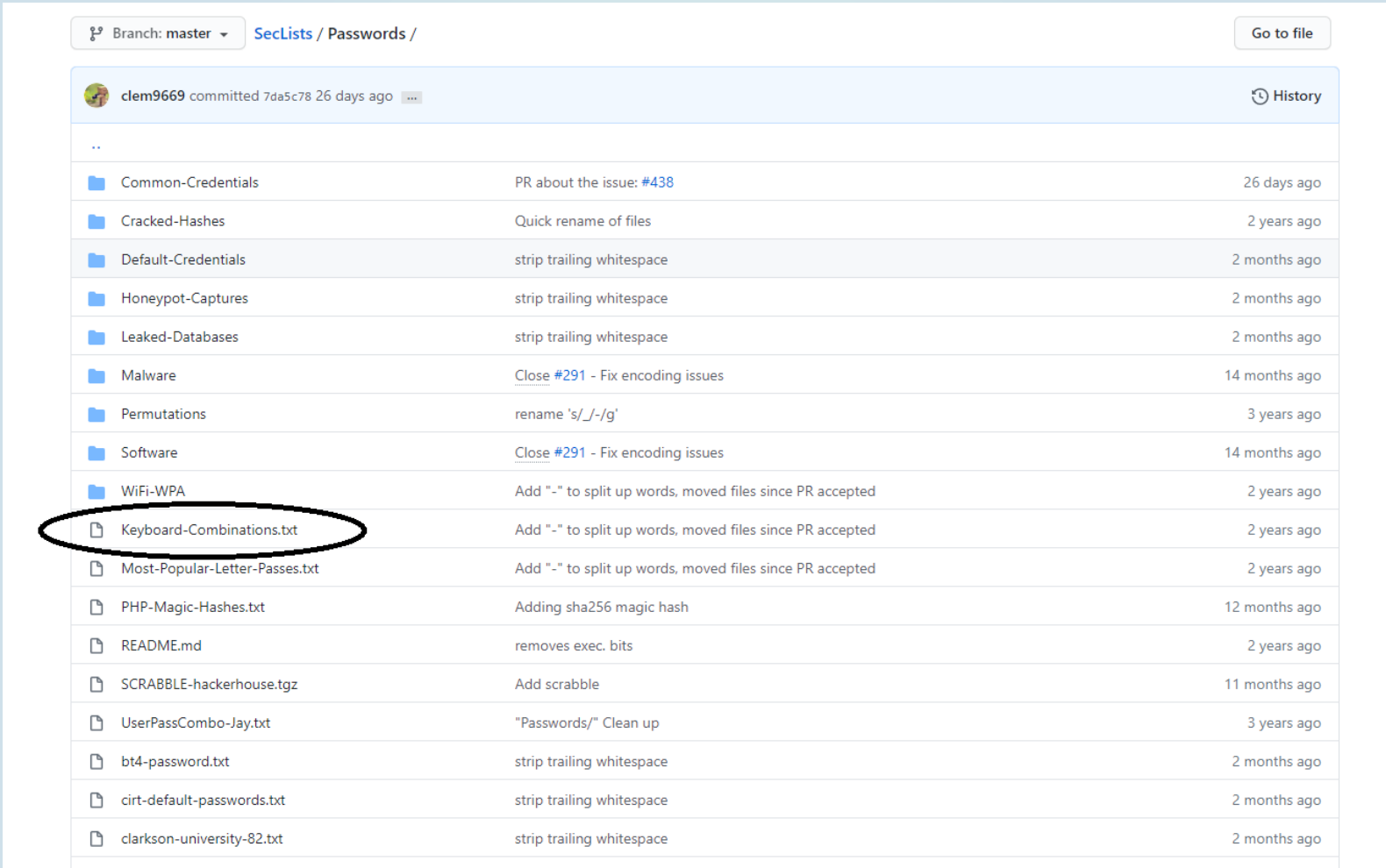
Branch: master SecLists / Passwords /

Create new file Find file History

danielmiessler committed on GitHub Merge pull request #98 from DarrenRainey/master Latest commit caa16c8 on May 12

000webhost.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
10_million_password_list_top_100.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
10_million_password_list_top_1000.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
10_million_password_list_top_10000.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
10_million_password_list_top_100000.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
10_million_password_list_top_1000000.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
10_million_password_list_top_500.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
10k_most_common.txt	Add 10k most common	3 years ago
1337speak.txt	added word alpha iteration	9 months ago
500-worst-passwords.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
Ashley_Madison.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
Basic_Spanish_List.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
KeyboardCombinations.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
Lizard_Squad.txt	Lizard Squad Passwords	10 months ago
MostPopularLetterPasses.txt	Removed duplicate values - awk '!x[\$0]++'	a year ago
README	Moved withcount files, created merged list	2 years ago
SplashData-2015.txt	Added splashdata 2015 to passwords.	2 years ago
Sucuri_Top_Wordpress_Passwords.txt	Update Sucuri_Top_Wordpress_Passwords.txt	10 months ago

# דוגמאות לקבצי סיסמאות מהרשת



Branch: master SecLists / Passwords / Go to file

clem9669 committed 7da5c78 26 days ago History

File/Folder	Description	Time
Common-Credentials	PR about the issue: #438	26 days ago
Cracked-Hashes	Quick rename of files	2 years ago
Default-Credentials	strip trailing whitespace	2 months ago
HoneyPot-Captures	strip trailing whitespace	2 months ago
Leaked-Databases	strip trailing whitespace	2 months ago
Malware	Close #291 - Fix encoding issues	14 months ago
Permutations	rename 's/_/-/g'	3 years ago
Software	Close #291 - Fix encoding issues	14 months ago
WiFi-WPA	Add "-" to split up words, moved files since PR accepted	2 years ago
Keyboard-Combinations.txt	Add "-" to split up words, moved files since PR accepted	2 years ago
Most-Popular-Letter-Passes.txt	Add "-" to split up words, moved files since PR accepted	2 years ago
PHP-Magic-Hashes.txt	Adding sha256 magic hash	12 months ago
README.md	removes exec. bits	2 years ago
SCRABBLE-hackerhouse.tgz	Add scrabble	11 months ago
UserPassCombo-Jay.txt	"Passwords/" Clean up	3 years ago
bt4-password.txt	strip trailing whitespace	2 months ago
cirt-default-passwords.txt	strip trailing whitespace	2 months ago
clarkson-university-82.txt	strip trailing whitespace	2 months ago



Branch: master

SecLists / Passwords / Keyboard-Combinations.txt

g0tmi1k Add "-" to split up words, moved files since PR accepted ...

1 contributor

9604 lines (9604 sloc) | 82.5 KB

```
1  zaq1zaq1
2  zaq1xsw2
3  zaq1cde3
4  zaq1vfr4
5  zaq1bgt5
6  zaq1nhy6
7  zaq1mju7
8  zaq1,ki8
9  zaq1.1o9
10 zaq1/;p0
11 zaq1ZQ!
12 zaq1XW@
13 zaq1DE#
14 zaq1FR$
15 zaq1BGT%
16 zaq1NHV^
17 zaq1JU&
18 zaq1<KI*
19 zaq1LO(
20 zaq1?:P)
21 zaq1qwer
22 zaq11234
23 zaq1asdf
24 zaq1zxcv
25 zaq1!@#$
26 zaq12345
27 zaq13456
28 zaq14576
29 zaq15678
30 zaq16789
```

# קומבינציות עוקבות על המקלדת

Rank	2011 <sup>[4]</sup>	2012 <sup>[5]</sup>	2013 <sup>[6]</sup>	2014 <sup>[7]</sup>	2015 <sup>[8]</sup>	2016 <sup>[3]</sup>	2017 <sup>[9]</sup>	2018 <sup>[10]</sup>	2019 <sup>[11]</sup>
1	password	password	123456	123456	123456	123456	123456	123456	123456
2	123456	123456	password	password	password	password	password	password	123456789
3	12345678	12345678	12345678	12345	12345678	12345	12345678	123456789	qwerty
4	qwerty	abc123	qwerty	12345678	qwerty	12345678	qwerty	12345678	password
5	abc123	qwerty	abc123	qwerty	12345	football	12345	12345	1234567
6	monkey	monkey	123456789	123456789	123456789	qwerty	123456789	111111	12345678
7	1234567	letmein	111111	1234	football	1234567890	letmein	1234567	12345
8	letmein	dragon	1234567	baseball	1234	1234567	1234567	sunshine	iloveyou
9	trustno1	111111	iloveyou	dragon	1234567	princess	football	qwerty	111111
10	dragon	baseball	adobe123 <sup>[a]</sup>	football	baseball	1234	iloveyou	iloveyou	123123
11	baseball	iloveyou	123123	1234567	welcome	login	admin	princess	abc123
12	111111	trustno1	admin	monkey	1234567890	welcome	welcome	admin	qwerty123
13	iloveyou	1234567	1234567890	letmein	abc123	solo	monkey	welcome	1q2w3e4r
14	master	sunshine	letmein	abc123	111111	abc123	login	666666	admin
15	sunshine	master	photoshop <sup>[a]</sup>	111111	1qaz2wsx	admin	abc123	abc123	qwertyuiop
16	ashley	123123	1234	mustang	dragon	121212	starwars	football	654321
17	bailey	welcome	monkey	access	master	flower	123123	123123	555555
18	passw0rd	shadow	shadow	shadow	monkey	passw0rd	dragon	monkey	lovely
19	shadow	ashley	sunshine	master	letmein	dragon	passw0rd	654321	7777777
20	123123	football	12345	michael	login	sunshine	master	!@#\$\$%^&*	welcome
21	654321	jesus	password1	superman	princess	master	hello	charlie	888888
22	superman	michael	princess	696969	qwertyuiop	hottie	freedom	aa123456	princess
23	qazwsx	ninja	azerty	123123	solo	loveme	whatever	donald	dragon
24	michael	mustang	trustno1	batman	passw0rd	zaq1zaq1	qazwsx	password1	password1
25	Football	password1	000000	trustno1	starwars	password1	trustno1	qwerty123	123qwe

# סרטון האקר בפעולת פריצת סיסמא...





Applications Places Terminal Tue 12:20

facebook.pl  
passwords.txt

Tutorial.txt

File Edit Search Options Help

Hi

Today i will show you how to Bruteforce Facebook Account

Tutorial By: AnonHacker

I'm not responsible for your actions!

root@kali: ~

File Edit View Search Terminal Help

```
root@kali:~# recordmydesktop --no-sound
Initial recording window is set to:
X:0 Y:0 Width:1680 Height:1050
Adjusted recording window is set to:
X:0 Y:4 Width:1680 Height:1040
Your window manager appears to be GNOME Shell

Detected compositing window manager.
Reverting to full screen capture at every frame.
To disable this check run with --no-wm-check
(though that is not advised, since it will probably produce faulty results).

Initializing...
Capturing!
```



## ניצול יכולות החיפוש בגוגל לצורך קבלת מידע על סיסמאות, משתמשים, חולשות וכדומה

Advanced Operator	Description	Examples
site:	Limit the search query to a specific domain or web site.	<ul style="list-style-type: none"> <li>site:example.com</li> </ul>
filetype:	Limit the search to text found in a specific file type	<ul style="list-style-type: none"> <li>mysqldump filetype:sql</li> </ul>
link:	Search for pages that link to the requested URL	<ul style="list-style-type: none"> <li>link:www.example.com</li> </ul>
cache:	Search and display a version of a web page as it was shown when Google crawled it.	<ul style="list-style-type: none"> <li>cache:example.com</li> </ul>
intitle:	Search for a string text within the title of a page.	<ul style="list-style-type: none"> <li>intitle:"index of"</li> </ul>
inurl:	Search for a string within a URL	<ul style="list-style-type: none"> <li>inurl:passwords.txt</li> </ul>

Logical Operator	Description	Examples
AND or +	Used to include keywords. All the keywords need to be found.	<ul style="list-style-type: none"> <li>web <b>AND</b> application <b>AND</b> security</li> <li>web +application +security</li> </ul>
NOT or -	Used to exclude keywords. All the keywords need to be found.	<ul style="list-style-type: none"> <li>web application <b>NOT</b> security</li> <li>web application -security</li> </ul>
OR or	Used to include keywords where either one keyword or another is matched. All the keywords need to be found.	<ul style="list-style-type: none"> <li>web application <b>OR</b> security</li> <li>web application  security</li> </ul>
Tilde (~)	Used to include synonyms and similar words.	<ul style="list-style-type: none"> <li>web application ~security</li> </ul>
Double quote ("")	Used to include exact matches.	<ul style="list-style-type: none"> <li>"web application security"</li> </ul>
Period (.)	Used to include single-character wildcards.	<ul style="list-style-type: none"> <li>.eb application security</li> </ul>
Asterisk (*)	Used to include single-word wildcards.	<ul style="list-style-type: none"> <li>web * security</li> </ul>
Parenthesis (())	Used to group queries	<ul style="list-style-type: none"> <li>("web security"   websecurity)</li> </ul>



Google search results for the query: `ext:sql intext:@gmail.com intext:password`

About 3,700 results (0.37 seconds)

quickforms3.eecs.uottawa.ca › readme › loginSetup ▾  
**Copyright (c) 2014 Austin Chamney, achamney@gmail.com ...**  
 ... into fact\_teamMembers values ('John','Smith','admin',  
 21232f297a57a5a743894a0e4a801fc3','devteam@gmail.com',1,1,0); --Username: admin,  
**Password: ...**

homepage.cs.latrobe.edu.au › letsconnect › letsconnect ▾  
**phpMyAdmin SQL Dump -- version 3.1.3.1 -- http://www ...**  
 ... `email` varchar(255) NOT NULL, `password` varchar(255) NOT NULL, `address`  
 varchar(255) DEFAULT NULL, `city` varchar(200) DEFAULT NULL, `contact` ...

175.138.31.43 › sistem › vote › admin › dbBackups ▾  
**polling3.sql - Name**  
 ... varchar(45) NOT NULL, `last\_name` varchar(45) NOT NULL, `email` varchar(45) NOT NULL,  
 `password` varchar(45) NOT NULL, PRIMARY KEY (`admin\_id`)) ...

www.sds.com.ph › survey\_1220201... ▾ Translate this page  
**SQLyog Community MySQL - 5.6.20 : Database - survey\_bkup ...**  
 ... NULL, `IS\_ACTIVE` tinyint(1) DEFAULT '1', `PASSWORD` varchar(255) COLLATE ...  
 (1,'prasurvey01.noreply@gmail.com',1,'Km99eyvu2CDNDBJYEvQ61Q' ...

github.com › blob › master › src › main › resources › i... ▾  
**com.ecs.samples.spring.simple.rest/import.sql at master ...**  
**password = admin1 \*/. INSERT INTO USERS (id,authority,email,password,registered) VALUES**  
 (1,'ROLE\_USER','user1@gmail.com' ...

`ext:sql intext:@gmail.com intext:password`



# Google hacking

## Advanced operator table:

Operator	Purpose	Mixes with other operators?	Can be used alone?	Does search work in			
				Web	Images	Groups	News
intitle	Search page title	yes	yes	yes	yes	yes	yes
allintitle	Search page title	no	yes	yes	yes	yes	yes
inurl	Search URL	yes	yes	yes	yes	not really	like intitle
allinurl	Search URL	no	yes	yes	yes	yes	like intitle
filetype	Search specific files	yes	no	yes	yes	no	not really
allintext	Search text of page only	not really	yes	yes	yes	yes	yes
site	Search specific site	yes	yes	yes	yes	no	not really
link	Search for links to pages	no	yes	yes	no	no	not really
inanchor	Search link anchor text	yes	yes	yes	yes	not really	yes
numrange	Locate number	yes	yes	yes	no	no	not really
daterange	Search in date range	yes	no	yes	not really	not really	not really
author	Group author search	yes	yes	no	no	yes	not really
group	Group name search	not really	yes	no	no	yes	not really
insubject	Group subject search	yes	yes	like intitle	like intitle	yes	like intitle
msgid	Group msgid search	no	yes	not really	not really	yes	not really

# הוצאת רשימת סיסמאות

```

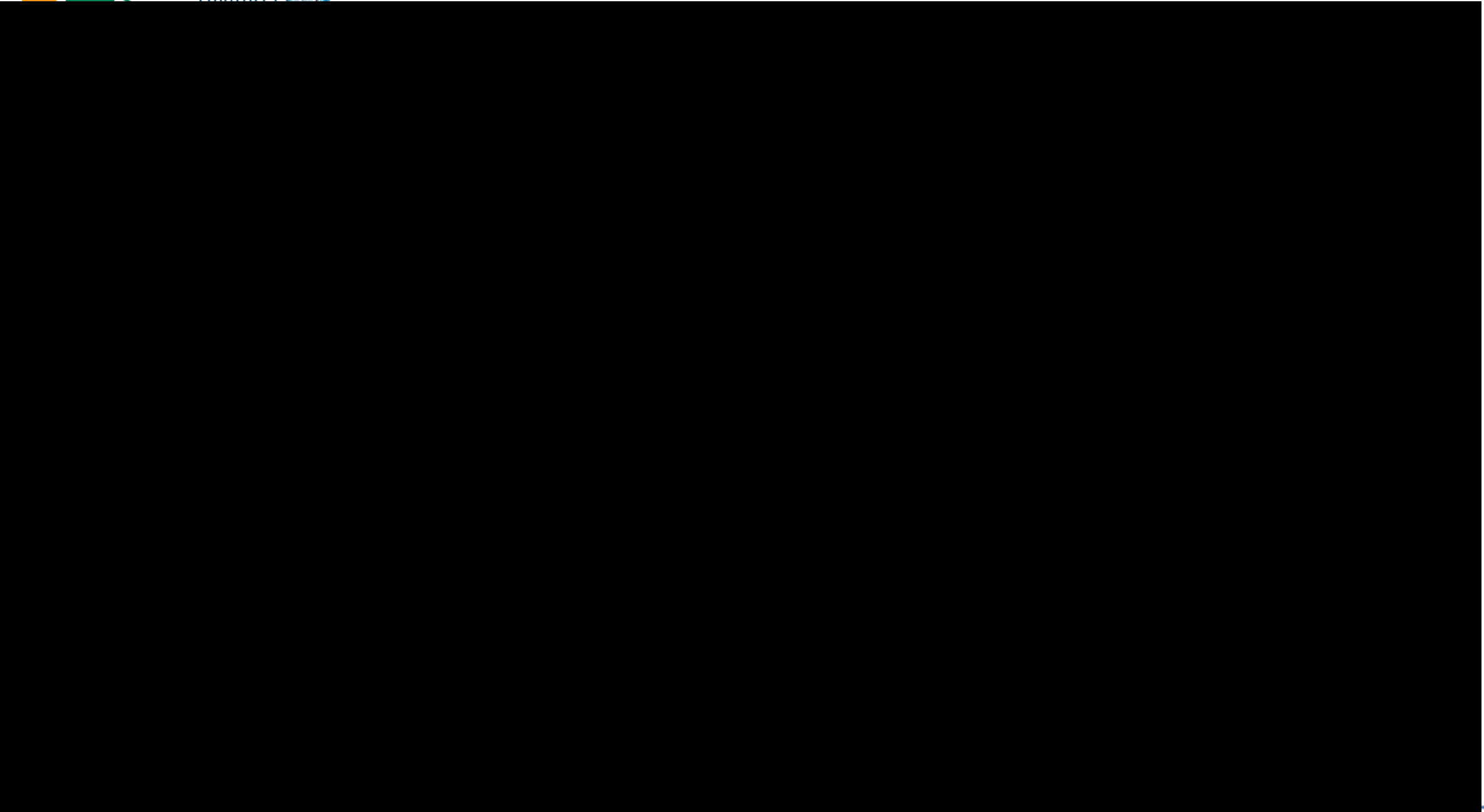
filetype:txt username pa: X Full text of "Opisrael Of: X www.fu
thonthao6.sextgem.com/files/superhit.txt
?><?php
='USER ID:rahul9267671167bimt@gmail.com';
='PASSWORD:rahulhina111';
?><?php
='USER ID:rahul9267671167bimt@gmail.com';
='PASSWORD:rahulhina111';
?><?php
='USER ID:yar yeh phisher kon kon use krha hai';
='PASSWORD:?????';
?><?php
='USER ID:dvirus_ajju@yahoo.in';
='PASSWORD: ';
?><?php
='USER ID:Prakashpsm@live.in';
='PASSWORD:akshaykatrina';
?><?php
='USER ID:Prakashpsm@live.in';
='PASSWORD:akshaykatrina';
?><?php
='USER ID:prakashpsm@live.in';
='PASSWORD:akshaykatrina';
?><?php
='USER ID:ashukp584@yahoo.com';
='PASSWORD:divyaps';
?><?php
='USER ID:ashukp584@yahoo.com';
='PASSWORD:divyaps';
?><?php
='USER ID:shrishsha@gmail.com';
='PASSWORD:9900878675';
?><?php
='USER ID:shrishsha@gmail.com';
='PASSWORD:9900878675';
?><?php
='USER ID:8hinda18@yahoo.com';
='PASSWORD: ';
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='USER ID:Dhiraj.suryavanshi';
='PASSWORD:585523';
?><?php
='USER ID:akibbagwan007@yahoo.com';
='PASSWORD:akibakib';
?><?php
='USER ID:akibbagwan007@yahoo.com';
='PASSWORD:786786';
?><?php

```



beithamaayan@walla.com	679239
hodakai@gmail.com	1q2w3e4r
aviv_rent1@bezeqint.net	7233826
inbalims@zahav.net.il	301084
etl88@walla.co.il	340867
contact@ekdesign.co.il	123456
adi.tzachar@gmail.com	adi123456
yeudit@green1realestate.com	123456
eve@vayax.co.il	e1234567
stevenalina@walla.com	eldorado
shimixxx@walla.com	1122
shayn@nioi.gov.il	dba621
alon@ekdesign.co.il	123456
karnona@yahoo.com	23307maya
elie_asaraf@walla.co.il	1q2w3e
kifkef@kifkef.co.il	458123
coolit@inn.co.il	tamar15
yardenbp@gmail.com	tulli2000
joel70@walla.com	123456
talizh@gmail.com	tal1234
orit_nakar2003@yahoo.com	tuxyrkhv
liormaaam@walla.com	0528546365
shacharf1@bezeqint.net	ys321948
drreshef@gmail.com	a355v411

you are wathing user and password



# כלי האקינג נוספים בתוך ה-LINUX - KALI



Minikatz – לקחת הרשאות , לבצע תנועה צידית (Lateral Movement)



MetaSploit – סט כלי תקיפה בעיקר כדי להפוך exploits למודולרים



Mac Spoofing , ARP Poisoning – Ettercap

