

## 11.01



The screenshot shows a terminal window on a Kali Linux system. The title bar indicates the session is named 'JOHN(8)'. The window displays the 'System Manager's Manual' for the 'john' command. The manual page includes sections for NAME, SYNOPSIS, DESCRIPTION, USAGE, and OPTIONS. The 'DESCRIPTION' section provides a brief overview of the John the Ripper tool. The 'USAGE' section details how to run the command with options like '-wordlist' and '-incremental'. The 'OPTIONS' section lists various command-line flags with their descriptions. The terminal prompt at the bottom is 'nam@kali:~\$'.

```
JOHN(8)                                         System Manager's Manual                                         JOHN(8)

NAME
    john - a tool to find weak passwords of your users

SYNOPSIS
    john [options] password-files

DESCRIPTION
    This manual page documents briefly the john command. This manual page was written for the Debian GNU/Linux distribution because the original program does not have a manual page. john, better known as John the Ripper, is a tool to find weak passwords of users in a server. John can use a dictionary or some search pattern as well as a password file to check for passwords. John supports different cracking modes and understands many ciphertext formats, like several DES variants, MD5 and blowfish. It can also be used to extract AFS and Windows NT passwords.

USAGE
    To use John, you just need to supply it a password file and the desired options. If no mode is specified, john will try "single" first, then "wordlist" and finally "incremental". Once John finds a password, it will be printed to the terminal and saved into a file called ./john/john.pot. John will read this file when it restarts so it doesn't try to crack already done passwords.

    To see the cracked passwords, use
    john -show passwd

    Important: do this under the same directory where the password was cracked (when using the cronjob, /var/lib/john), otherwise it won't work.

    While cracking, you can press any key for status, or Ctrl+C to abort the session, saving point information to a file (./john/john.rec by default). By the way, if you press Ctrl+C twice John will abort immediately without saving. The point information is also saved every 10 minutes (configurable in the configuration file, ./john/john.ini or ./john/john.conf) in case of a crash.

    To continue an interrupted session, run:
    john -restore

    Now, you may notice that many accounts have a disabled shell, you can make John ignore these (assume that shell is called /etc/expired):
    john -show -shells::/etc/expired passwd

    You might want to mail all the users who got weak passwords, to tell them to change the passwords. It's not always a good idea though (unfortunately, lots of people seem to ignore such mail, it can be used as a hint for crackers, etc), but anyway, I'll assume you know what you're doing. Get a copy of the 'mailer' script supplied with John, so you won't change anything that's under /usr/sbin; edit the message it sends, and possibly the mail command inside it (especially if the password file is from a different box than you got John running on). Then run:
    ./mailer passwd

    Anyway, you probably should have a look at /usr/share/doc/john/OPTIONS for a list of all the command line options, and at /usr/share/doc/john/EXAMPLES for more John usage examples with other cracking modes.

OPTIONS
    All the options recognized by john start with a single dash ('-'). A summary of options is included below.

    -external:MODE
        Enables an external mode, using external functions defined in ~/john.ini's [List.External:MODE] section.

    -format:NAME
        Allows you to override the ciphertext format detection. Currently, valid format names are DES, BSDI, MD5, BF, AFS, LM. You can use this option when cracking or with '-test'. Note that John can't crack password files with different ciphertext formats at the same time.

    -groups:[-]GID[,...]
        Tells John to load users of the specified group(s) only.

    -incremental[:MODE]
        Enables the incremental mode, using the specified ~/john.ini definition (section [Incremental:MODE], or [Incremental:All] by default).

    -makechars:FILE
        Generates a charset file, based on character frequencies from ~/john/john.pot, for use with the incremental mode. The entire ~/john/john.pot will be used for the charset file unless you specify some password files. You can also use an external filter() routine with this option.

    -restore[:FILE]
        Continues an interrupted cracking session, reading point information from the specified file (./john/john.rec by default).

    -rules
        Enables wordlist rules, that are read from [List.Rules:Wordlist] in /etc/john/john.conf (or the alternative configuration file you might specify on the command line). This option requires the -wordlist option to be passed as well.

    -salts:[-]COUNT
        This feature sometimes allows you to achieve better performance. For example you can crack only some salts using '-salts:2' faster, and then crack the rest using '-salts:-2'. Total cracking time will be about the same, but you will get some passwords cracked earlier.

    Manual page john(8) line 1 (press h for help or q to quit)
```



KALI LINUX  
"the quieter you become, the more you are able to hear"

```
(nam@kali)-[~]
$ sudo john
[sudo] password for nam:
Created directory: /root/.john
John the Ripper 1.9.0-jumbo-1+bleeding-aec1328d6c 2021-11-02 10:45:52 +0100 OMP [linux-gnu 64-bit x86_64 SSE2 AC]
Copyright (c) 1996-2021 by Solar Designer and others
Homepage: https://www.openwall.com/john/
Usage: john [OPTIONS] [PASSWORD-FILES]
Use --help to list all available options.

(nam@kali)-[~]
$ man john
(nam@kali)-[~]
$
```

```
(nam@kali)-[~]
└─$ sudo john --test
[sudo] password for nam:
Will run 14 OpenMP threads
Benchmarking: decrypt, traditional crypt(3) [DES 128/128 SSE2] ... (14xOMP) DONE
Many salts:    41250K c/s real, 3637K c/s virtual
Only one salt: 34491K c/s real, 2714K c/s virtual

Benchmarking: bsdicrypt, BSDI crypt(3) ("J9...", 725 iterations) [DES 128/128 SSE2] ... (14xOMP) DONE
Speed for cost 1 (iteration count) of 725
Warning: "Many salts" test limited: 57/256
Many salts:   100141 c/s real, 11463 c/s virtual
Only one salt: 1146K c/s real, 100471 c/s virtual

Benchmarking: md5crypt, crypt(3) $1$ (and variants) [MD5 128/128 SSE2 4x3] ... (14xOMP) DONE
Many salts:   324867 c/s real, 29040 c/s virtual
Only one salt: 336000 c/s real, 29459 c/s virtual

Benchmarking: md5crypt-long, crypt(3) $1$ (and variants) [MD5 32/64] ... (14xOMP) DONE
Raw:   58779 c/s real, 5210 c/s virtual

Benchmarking: bcrypt ("$2a$05", 32 iterations) [Blowfish 32/64 X3] ... (14xOMP) DONE
Speed for cost 1 (iteration count) of 32
Raw:   10980 c/s real, 989 c/s virtual

Benchmarking: scrypt (16384, 8, 1) [Salsa20/8 128/128 SSE2] ... (14xOMP) DONE
Speed for cost 1 (N) of 16384, cost 2 (r) of 8, cost 3 (p) of 1
Raw:   257 c/s real, 24.3 c/s virtual

Benchmarking: LM [DES 128/128 SSE2] ... (14xOMP) DONE
Raw:   110218K c/s real, 9241K c/s virtual

Benchmarking: AFS, Kerberos AFS [DES 48/64 4K] ... DONE
Short: 771840 c/s real, 771840 c/s virtual
Long:  770688 c/s real, 770688 c/s virtual

Benchmarking: tripcode [DES 128/128 SSE2] ... (14xOMP) DONE
Raw:   4207K c/s real, 364723 c/s virtual

Benchmarking: AndroidBackup [PBKDF2-SHA1 128/128 SSE2 4x AES] ... (14xOMP) DONE
Speed for cost 1 (iteration count) of 10000
Raw:   3103 c/s real, 330 c/s virtual

Benchmarking: adxcrypt, IBM/Toshiba 4690 [ADXCRYPT 32/64] ... (14xOMP) DONE
Raw:   40677K c/s real, 4657K c/s virtual

Benchmarking: agilekeychain, 1Password Agile Keychain [PBKDF2-SHA1 AES 128/128 SSE2 4x] ... (14xOMP) DONE
Speed for cost 1 (iteration count) of 1000
Raw:   57730 c/s real, 5123 c/s virtual

Benchmarking: aix-ssha1, AIX LPA {ssha1} [PBKDF2-SHA1 128/128 SSE2 4x] ... (14xOMP) DONE
Speed for cost 1 (iteration count) of 64
Many salts:   1039K c/s real, 91694 c/s virtual
Only one salt: 1107K c/s real, 92188 c/s virtual

Benchmarking: aix-ssha256, AIX LPA {ssha256} [PBKDF2-SHA256 128/128 SSE2 4x] ... (14xOMP) DONE
Speed for cost 1 (iteration count) of 64
Many salts:   309810 c/s real, 27252 c/s virtual
Only one salt: 534898 c/s real, 44880 c/s virtual

Benchmarking: aix-ssha512, AIX LPA {ssha512} [PBKDF2-SHA512 128/128 SSE2 2x] ... (14xOMP) DONE
Speed for cost 1 (iteration count) of 64
Many salts:   164696 c/s real, 13966 c/s virtual
Only one salt: 119745 c/s real, 11091 c/s virtual

Benchmarking: andOTP [SHA256 32/64] ... (14xOMP) DONE
Raw:   1850K c/s real, 152161 c/s virtual

Benchmarking: ansible, Ansible Vault [PBKDF2-SHA256 HMAC-256 128/128 SSE2 4x] ... (14xOMP) DONE
Speed for cost 1 (iteration count) of 10000
Raw:   1783 c/s real, 169 c/s virtual

Benchmarking: argon2 [Blake2 SSE2] ... (14xOMP) DONE
Speed for cost 1 (t) of 3, cost 2 (m) of 4096, cost 3 (p) of 1, cost 4 (type [0:Argon2d 1:Argon2i]) of 0 and 1
Raw:   652 c/s real, 66.5 c/s virtual

Benchmarking: as400-des, AS/400 DES [DES 32/64] ... DONE
Raw:   296912 c/s real, 25049 c/s virtual

Benchmarking: as400-ssha1, AS400-SaltedSHA1 [sha1(utf16be(space_pad_10(uc($s)).$p)) (IBM AS/400 SHA1) 128/128 SSE2 4x1] ... DONE
Many salts:   23447K c/s real, 23532K c/s virtual
```

```
(nam㉿kali)-[~]
$ sudo adduser weissman
[sudo] password for nam:
info: Adding user 'weissman' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group 'weissman' (1001) ...
info: Adding new user 'weissman' (1001) with group `weissman (1001)' ...
info: Creating home directory '/home/weissman' ...
info: Copying files from '/etc/skel' ...
New password:
Retype new password:
Sorry, passwords do not match.
passwd: Authentication token manipulation error
passwd: password unchanged
Try again? [y/N]
Changing the user information for weissman
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []
Is the information correct? [Y/n]
info: Adding new user 'weissman' to supplemental / extra groups `users' ...
info: Adding user 'weissman' to group `users' ...

(nam㉿kali)-[~]
$ sudo adduser upper
info: Adding user 'upper' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group 'upper' (1002) ...
info: Adding new user 'upper' (1002) with group `upper (1002)' ...
info: Creating home directory '/home/upper' ...
info: Copying files from '/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for upper
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []
Is the information correct? [Y/n]
info: Adding new user 'upper' to supplemental / extra groups `users' ...
info: Adding user 'upper' to group `users' ...

(nam㉿kali)-[~]
$ sudo adduser lower
info: Adding user 'lower' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group 'lower' (1003) ...
info: Adding new user 'lower' (1003) with group `lower (1003)' ...
info: Creating home directory '/home/lower' ...
info: Copying files from '/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for lower
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []
Is the information correct? [Y/n]
info: Adding new user 'lower' to supplemental / extra groups `users' ...
info: Adding user 'lower' to group `users' ...

(nam㉿kali)-[~]
$ sudo adduser mixed
info: Adding user 'mixed' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group 'mixed' (1004) ...
info: Adding new user 'mixed' (1004) with group `mixed (1004)' ...
info: Creating home directory '/home/mixed' ...
info: Copying files from '/etc/skel' ...
New password:
Retype new password:
```

```
nam@kali: ~
```

File Actions Edit View Help

Retype new password:  
passwd: password updated successfully  
Changing the user information for upper  
Enter the new value, or press ENTER for the default  
Full Name []:  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:  
Is the information correct? [Y/n]  
info: Adding new user 'upper' to supplemental / extra groups 'users' ...  
info: Adding user 'upper' to group 'users' ...

-(nam@kali)-[~]  
\$ sudo adduser lower  
info: Adding user 'lower' ...  
info: Selecting UID/GID from range 1000 to 59999 ...  
info: Adding new group 'lower' (1003) ...  
info: Adding new user 'lower' (1003) with group 'lower (1003)' ...  
info: Creating home directory '/home/lower' ...  
info: Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for lower  
Enter the new value, or press ENTER for the default  
Full Name []:  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:  
Is the information correct? [Y/n]  
info: Adding new user 'lower' to supplemental / extra groups 'users' ...  
info: Adding user 'lower' to group 'users' ...

-(nam@kali)-[~]  
\$ sudo adduser mixed  
info: Adding user 'mixed' ...  
info: Selecting UID/GID from range 1000 to 59999 ...  
info: Adding new group 'mixed' (1004) ...  
info: Adding new user 'mixed' (1004) with group 'mixed (1004)' ...  
info: Creating home directory '/home/mixed' ...  
info: Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for mixed  
Enter the new value, or press ENTER for the default  
Full Name []:  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:  
Is the information correct? [Y/n]  
info: Adding new user 'mixed' to supplemental / extra groups 'users' ...  
info: Adding user 'mixed' to group 'users' ...

-(nam@kali)-[~]  
\$ sudo adduser story  
info: Adding user 'story' ...  
info: Selecting UID/GID from range 1000 to 59999 ...  
info: Adding new group 'story' (1005) ...  
info: Adding new user 'story' (1005) with group 'story (1005)' ...  
info: Creating home directory '/home/story' ...  
info: Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for story  
Enter the new value, or press ENTER for the default  
Full Name []:  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:  
Is the information correct? [Y/n]  
info: Adding new user 'story' to supplemental / extra groups 'users' ...  
info: Adding user 'story' to group 'users' ...

-(nam@kali)-[~]



```
nam@kali: ~
info: Adding user `story' to group `users' ...
[nam@kali: ~]
$ cat /etc/passwd
root:x:0:0:root:/root:/usr/bin/zsh
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lpd:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
_apt:x:42:65534::/nonexistent:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:988:998:systemd Network Management:/usr/sbin/nologin
mysql:x:100:107:MySQL Server,,,:/nonexistent:/bin/false
_sentrypeer:x:101:108:/var/lib/sentrypeer:/usr/sbin/nologin
cntlm:x:102:65534::/var/run/cntlm:/bin/sh
tss:x:103:109:TPM software stack,,,:/var/lib/tpm:/bin/false
strongswan:x:104:65534::/var/lib/strongswan:/usr/sbin/nologin
systemd-timesync:x:997:997:systemd Time Synchronization:/usr/sbin/nologin
Debian-exim:x:105:10::/var/spool/exim4:/usr/sbin/nologin
uuid:x:106:111::/run/uuid:/usr/sbin/nologin
debian-tor:x:107:112::/var/lib/tor:/bin/false
redsocks:x:108:113::/var/run/redsocks:/usr/sbin/nologin
rwhod:x:109:65534::/var/spool/rwho:/usr/sbin/nologin
_gophish:x:110:115::/var/lib/gophish:/usr/sbin/nologin
freerad:x:111:116::/etc/freeradius:/usr/sbin/nologin
iodine:x:112:65534::/run/iodine:/usr/sbin/nologin
messagebus:x:113:117::/nonexistent:/usr/sbin/nologin
clamav:x:114:118::/var/lib/clamav:/bin/false
miredo:x:115:65534::/var/run/miredo:/usr/sbin/nologin
redis:x:116:121::/var/lib/redis:/usr/sbin/nologin
arpwatch:x:117:123:ARP Watcher,,,:/var/lib/arpwatch:/bin/sh
usbmux:x:118:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
mosquitto:x:119:124::/var/lib/mosquitto:/usr/sbin/nologin
tcpdump:x:120:126::/nonexistent:/usr/sbin/nologin
sshd:x:121:65534::/run/sshd:/usr/sbin/nologin
_rpc:x:122:65534::/run/rpcbind:/usr/sbin/nologin
dnsmasq:x:123:65534::dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
statd:x:124:65534::/var/lib/nfs:/usr/sbin/nologin
freerad-wpe:x:125:130::/etc/freeradius-wpe:/usr/sbin/nologin
avahi:x:126:132:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
gpsd:x:127:20:GPSD system user,,,:/run/gpsd:/bin/false
stunnel4:x:996:996:stunnel service system account:/var/run/stunnel4:/usr/sbin/nologin
Debian-snmp:x:128:133::/var/lib/snmp:/bin/false
_gvmm:x:129:134::/var/lib/openvms:/usr/sbin/nologin
speech-dispatcher:x:130:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
sshh:x:131:135::/nonexistent:/usr/sbin/nologin
postgres:x:132:136:PostgreSQL administrator,,,:/var/lib/postgresql:/bin/bash
pulse:x:133:138:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
inetutils:x:134:140::/var/lib/inetutils:/usr/sbin/nologin
lightdm:x:135:141:Light Display Manager:/var/lib/lightdm:/bin/false
geoclue:x:136:142::/var/lib/geoclue:/usr/sbin/nologin
_defectdojo:x:137:143::/var/log/defectdojo:/usr/sbin/nologin
sane:x:138:145::/var/lib/sane:/usr/sbin/nologin
dradis:x:139:146::/var/lib/dradis:/usr/sbin/nologin
beef-xss:x:140:147::/var/lib/beef-xss:/usr/sbin/nologin
polkitd:x:994:994:polkit:/nonexistent:/usr/sbin/nologin
rtkit:x:141:148:RealtimeKit,,,:/proc:/usr/sbin/nologin
colord:x:142:149:color colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
nm-openvpn:x:143:150:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
nm-openconnect:x:144:151:NetworkManager OpenConnect plugin,,,:/var/lib/NetworkManager:/usr/sbin/nologin
_caldera:x:145:153::/var/lib/caldera:/usr/sbin/nologin
nam:x:1000:1000:nam,,,:/home/nam:/usr/bin/zsh
weissman:x:1001:1001,,,:/home/weissman:/bin/bash
upper:x:1002:1002,,,:/home/upper:/bin/bash
lower:x:1003:1003,,,:/home/lower:/bin/bash
mixed:x:1004:1004,,,:/home/mixed:/bin/bash
story:x:1005:1005,,,:/home/story:/bin/bash
[nam@kali: ~]
$
```



KALI LINUX  
Quieter you become, the more you are able to hear™

```
nam@kali: ~
$ story:x:1005:1005:,,,:/home/story:/bin/bash
(nam@kali)-[~]
└─$ sudo cat /etc/shadow
root::19816:0:99999:7:::
daemon:*:19816:0:99999:7:::
bin:*:19816:0:99999:7:::
sys:*:19816:0:99999:7:::
sync:*:19816:0:99999:7:::
games:*:19816:0:99999:7:::
man:*:19816:0:99999:7:::
lp:*:19816:0:99999:7:::
mail:*:19816:0:99999:7:::
news:*:19816:0:99999:7:::
uucp:*:19816:0:99999:7:::
proxy:*:19816:0:99999:7:::
www-data:*:19816:0:99999:7:::
backup:*:19816:0:99999:7:::
list:*:19816:0:99999:7:::
irc:*:19816:0:99999:7:::
_apt:*:19816:0:99999:7:::
nobody:*:19816:0:99999:7:::
systemd-network!*:19816:::::
mysql!:19816:::::
_sentrypeer!:19816:::::
cntlm!:19816:::::
tss!:19816:::::
strongswan!:19816:::::
systemd-timesync!*:19816:::::
Debian-exim!:19816:::::
uuidd!:19816:::::
debian-tor!:19816:::::
redsocks!:19816:::::
rwhod!:19816:::::
_gophish!:19816:::::
freerad!:19816:::::
iodine!:19816:::::
messagebus!:19816:::::
clamav!:19816:::::
miredo!:19816:::::
redis!:19816:::::
arpwatch!:19816:::::
usbmux!:19816:::::
mosquitto!:19816:::::
tcpdump!:19816:::::
sshd!:19816:::::
_rpc!:19816:::::
dnsmasq!:19816:::::
statd!:19816:::::
freerad-wpe!:19816:::::
avahi!:19816:::::
gpsd!:19816:::::
stunnel4!*:19816:::::
Debian-snmp!:19816:::::
_gvmm!:19816:::::
speech-dispatcher!:19816:::::
sslh!:19816:::::
postgres!:19816:::::
pulse!:19816:::::
inetsim!:19816:::::
lightdm!:19816:::::
geoclue!:19816:::::
_defectdojo!:19816:::::
saneid!:19816:::::
dradis!:19816:::::
beef-xss!:19816:::::
polkitd!:19816:::::
rtkit!:19816:::::
colorl!:19816:::::
nm-openvpn!:19816:::::
nm-openconnect!:19816:::::
 Caldera!:19816:::::
nam:$j9T$gCNiceYNwtaT46cyHt5FZ0$wXQKQacCe//hT1tBqOiaZyi/spr8ydKYzyMOpNnLf17:19816:0:99999:7:::
weissman!:19829:0:99999:7:::
upper:$j9T$pFVmcpj3ph55jbWjBfhF/$9F3GCnM1/3p1/Ipp5aSkqGZzi5ij7k.3gly26Tg7jq6:19829:0:99999:7:::
lower:$j9T$sy0hx/mfhk/1pRnZ1L0r.$Dg8R.L0WNWWBa/Xmfir5qE/Q2cg6lH1CZDJTHfB4Z07:19829:0:99999:7:::
mixed:$j9T$p9axl/KesTP2vVRPSm/NR.$FIdnbqF./Sm/rMWAY54cnlrJ7LWJBbkNwEVk/Y5qt01:19829:0:99999:7:::
story:$j9T$N19K9WydzyEtRiaYUtafa01$gt7QcKKM5ddkeFAtQ0UDzwDKH2oGpA1eCG2gt2Rp.ZA:19829:0:99999:7:::
```



KALI LINUX  
"the quieter you become, the more you are able to hear"

```
nam@kali: ~
File Actions Edit View Help
UNSHADOW(8)                               System Manager's Manual                               UNSHADOW(8)
NAME
unshadow - combines passwd and shadow files
SYNOPSIS
unshadow password-file shadow-file
DESCRIPTION
This manual page documents briefly the unshadow command, which is part of the john package. This manual page was written for the Debian GNU/Linux distribution because the original program does not have a manual page. john, better known as John the Ripper, is a tool to find weak passwords of users in a server.

The unshadow tool combines the passwd and shadow files so John can use them. You might need this since if you only used your shadow file, the GECOS information wouldn't be used by the "single crack" mode, and also you wouldn't be able to use the '-shells' option. On a normal system you'll need to run unshadow as root to be able to read the shadow file.

SEE ALSO
john(8), mailer(8), unafs(8), unique(8).
The programs are documented fully by John's documentation, which should be available in /usr/share/doc/john or other location, depending on your system.
AUTHOR
This manual page was written by Jordi Mallach <jordi@debian.org>, for the Debian GNU/Linux system (but may be used by others).  

John the Ripper and mailer were written by Solar Designer <solar@openwall.com>. The complete list of contributors can be found in the CREDITS file in the documentation directory.
```

```
nam@kali: ~
└$ sudo unshadow /etc/passwd /etc/shadow >rochester.txt
└(nam@kali)-[~]
└$ cat rochester.txt
root:!0:0:root:/root:/usr/bin/zsh
daemon!*1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:*2:2:bin:/bin:/usr/sbin/nologin
sys:*3:3:sys:/dev:/usr/sbin/nologin
sync:*4:65534:sync:/bin:/bin/sync
games:*5:60:games:/usr/games:/usr/sbin/nologin
man:*6:12:man:/var/cache/man:/usr/sbin/nologin
lp!*7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail!*8:8:mail:/var/mail:/usr/sbin/nologin
news!*9:9:news:/var/spool/news:/usr/sbin/nologin
uucp!*10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy!*11:13:proxy:/bin:/usr/sbin/nologin
www-data!*13:33:www-data:/var/www:/usr/sbin/nologin
backup!*34:34:backup:/var/backups:/usr/sbin/nologin
list!*38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc!*39:39:ircd:/run/ircd:/usr/sbin/nologin
_apt!*42:65534::/noneexistent:/usr/sbin/nologin
nobody!*65534:65534:nobody:/noneexistent:/usr/sbin/nologin
systemd-network!*1:998:998:system Network Management:/:/usr/sbin/nologin
mysql!*100:107:MySQL Server,,:/noneexistent:/bin/false
_sentrypeer!*1:01:08:/var/lib/sentrypeer:/usr/sbin/nologin
cntlm!*102:65534::/var/run/cntlm:/bin/sh
tss!*103:109:TPM software stack,,,:/var/lib/tpm:/bin/false
strongswan!*104:65534::/var/lib/strongswan:/usr/sbin/nologin
systemd-timesync!*1:997:997:systemd Time Synchronization:/:/usr/sbin/nologin
Debian-exim!*105:10:/:/var/spool/exim4:/usr/sbin/nologin
uuidd!*106:111:/run/uuidd:/usr/sbin/nologin
debian-tor!*107:112:/:/var/lib/tor:/bin/false
redsocks!*108:113:/:/var/run/redsocks:/usr/sbin/nologin
rwhod!*109:65534::/var/spool/rwho:/usr/sbin/nologin
_gophish!*110:115::/var/lib/gophish:/usr/sbin/nologin
freerad!*111:116::/etc/freeradius:/usr/sbin/nologin
iodine!*112:65534::/run/iodine:/usr/sbin/nologin
messagebus!*113:117::/noneexistent:/usr/sbin/nologin
clamav!*114:118::/var/lib/clamav:/bin/false
miredo!*115:65534::/var/run/miredo:/usr/sbin/nologin
redis!*116:121::/var/lib/redis:/usr/sbin/nologin
arpwatch!*117:123:ARP Watcher,,,:/var/lib/arpwatch:/bin/sh
usbmux!*118:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
mosquitto!*119:124::/var/lib/mosquitto:/usr/sbin/nologin
tcpdump!*120:126::/noneexistent:/usr/sbin/nologin
sshd!*121:65534::/run/sshd:/usr/sbin/nologin
_rpc!*122:65534::/run/rpcbind:/usr/sbin/nologin
dnsmasq!*123:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
statd!*124:65534::/var/lib/nfs:/usr/sbin/nologin
freerad-wpe!*125:130::/etc/freeradius-wpe:/usr/sbin/nologin
avahi!*126:132:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
gpsd!*127:20:GPSD system user,,,:/run/gpsd:/bin/false
stunnel4!*129:996:stunnel service system account:/var/run/stunnel4:/usr/sbin/nologin
Debian-snmp!*128:133::/var/lib/snmp:/bin/false
_gvm!*129:134::/var/lib/openvas:/usr/sbin/nologin
speech-dispatcher!*130:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
sshd!*131:135::/noneexistent:/usr/sbin/nologin
postgres!*132:136:PostgreSQL administrator,,,:/var/lib/postgresql:/bin/bash
pulse!*133:138:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
inetutils!*134:140::/var/lib/inetutils:/usr/sbin/nologin
lightdm!*135:141:Light Display Manager:/var/lib/lightdm:/bin/false
geoclue!*136:142::/var/lib/geoclue:/usr/sbin/nologin
_defectdojo!*137:143::/var/log/defectdojo:/usr/sbin/nologin
sane!*138:145::/var/lib/sane:/usr/sbin/nologin
dradis!*139:146::/var/lib/dradis:/usr/sbin/nologin
beef-xss!*140:147::/var/lib/beef-xss:/usr/sbin/nologin
polkitd!*144:994:polkit:/noneexistent:/usr/sbin/nologin
rtkit!*141:148:RealtimeKit,,,:/proc:/usr/sbin/nologin
colorl!*142:149:color colour management daemon,,,:/var/lib/colorl:/usr/sbin/nologin
nm-openvpn!*143:150:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
nm-openconnect!*144:151:NetworkManager OpenConnect plugin,,,:/var/lib/NetworkManager:/usr/sbin/nologin
_caldera!*145:153::/var/lib/caldera:/usr/sbin/nologin
nam:$j97$cGNiceNwtaT46cyHt5FZ0$wXQKqAcCe//hTlt8q0IAZyi$pr8ydKYzyMOpNnLf7:1000:1000:nam,,,:/home/nam:/usr/bin/zsh
weissman!*1001:1001,,,:/home/weissman:/bin/bash
upper:$j97$PfVmcjp3ph55JbWJBfhF/$9F3GnM1/jpI/IppsaSkqGZzi5ij7k.3gLy2Gtg7jq6:1002:1002,,,:/home/upper:/bin/bash
lower:$j97$syOhx/mfhk/1pRnZ1lOr.$Dg8R.L0WWNBa/Xmfir5qE/Q2cg6lH1CzDJTHF84Z07:1003:1003,,,:/home/lower:/bin/bash
mixed:$j97$pxaxL/KesTP2vVRPSm/NR.$IdnbQF./Sm/rMWAY54cnlr7LWBBokNwEVk/Y5qt01:1004:1004,,,:/home/mixed:/bin/bash
story:$j97$N19KW9ydzEtRiaYUta01$gt7QcKKM5ddkeFAtQUDzwDKH2oGpA1eCG2gt2Rp.ZA:1005:1005,,,:/home/story:/bin/bash
└(nam@kali)-[~]
└$
```

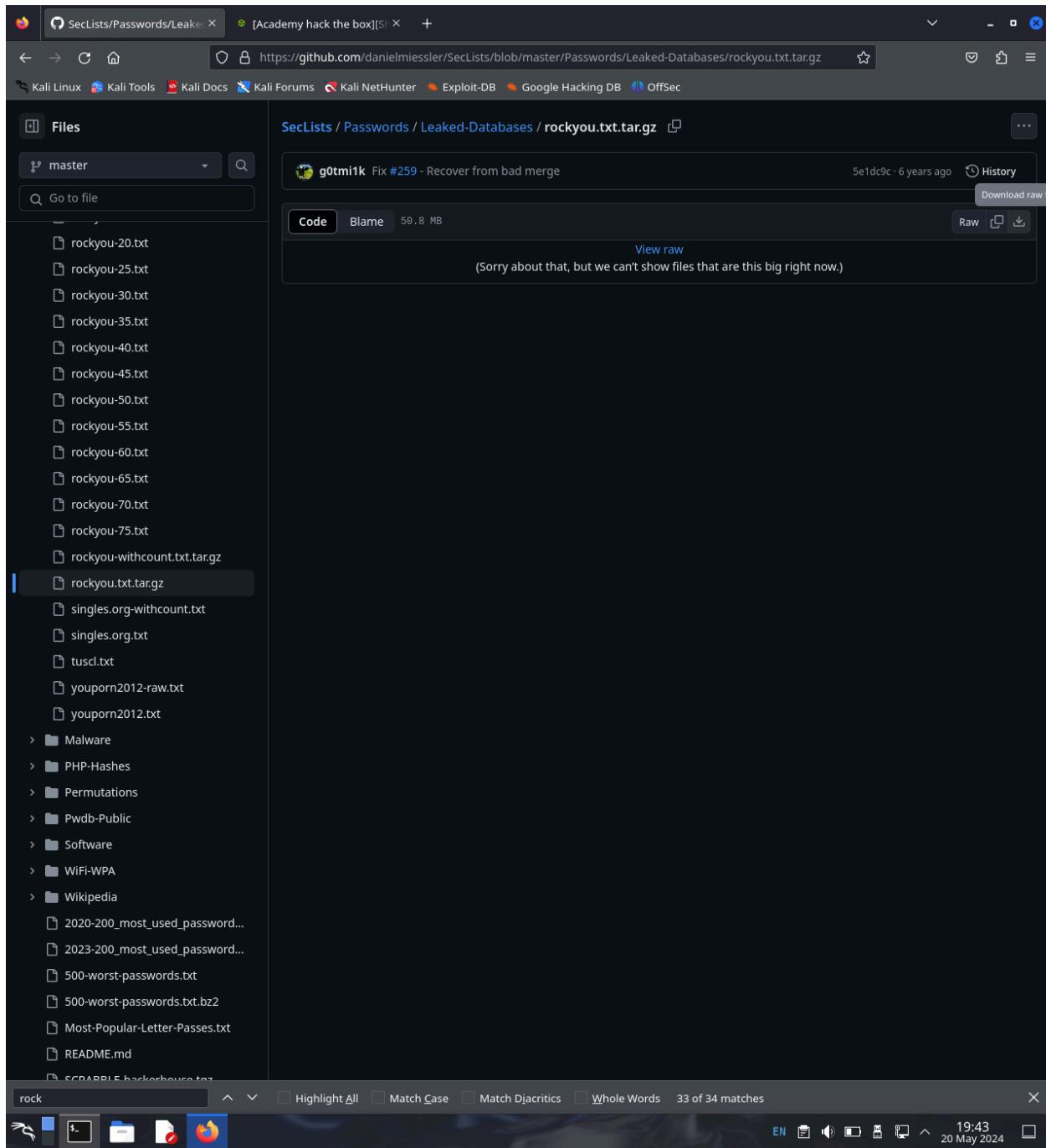


"the quieter you become, the more you are able to hear"

```
(nam㉿kali)-[~]
$ sudo john --wordlist=/usr/share/john/password.lst --format=crypt rochester.txt
Using default input encoding: UTF-8
Loaded 5 password hashes with 5 different salts (crypt, generic crypt(3) [?/64])
Cost 1 (algorithm [1:descrypt 2:md5crypt 3:summd5 4:bcrypt 5:sha256crypt 6:sha512crypt]) is 0 for all loaded hashes
Cost 2 (algorithm specific iterations) is 1 for all loaded hashes
Will run 14 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
password      (lower)
Password      (mixed)
PASSWORD      (upper)
1             (nam)
3bears        (story)
5g 0:00:00:38 DONE (2024-04-16 05:49) 0.1285g/s 69.11p/s 229.5c/s 229.5C/s 10sne1..nrmal
Use the "--show" option to display all of the cracked passwords reliably
Session completed.

(nam㉿kali)-[~]
$
```





```
~ : zsh — Konsole
File Edit View Bookmarks Plugins Settings Help
New Tab Split View
Copy Paste Find

(nam@kali)-[~]
$ cp Downloads/rockyou.txt.tar.gz .
(nam@kali)-[~]
$ gzip -d rockyou.txt.tar.gz
(nam@kali)-[~]
$ ls -l /usr/share/john/password.lst
-rw-r--r-- 1 root root 26326 Nov 2 2021 /usr/share/john/password.lst
(nam@kali)-[~]
$ ls -l rockyou.txt
-rw-r--r-- 1 nam nam 139921497 Sep 23 2015 rockyou.txt
(nam@kali)-[~]
$ sudo apt install leafpad
[sudo] password for nam:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
leafpad is already the newest version (0.8.18.1-5).
The following packages were automatically installed and are no longer required:
dkms libaiol1 libatk-adaptor libboost-dev libboost1.83-dev libgsoap-2.8.132 libopenblas-dev libopenblas-pthread-dev libopenblas0 libpython3-all-dev libpython3.12 libpython3.12-dev libtpm3.0 libtunl0 libvncserver1 libxsimd-dev python3-all-dev python3-anyjson python3-beniget python3-gast python3-pyatspi python3-pypdf2
python3-pypeteer python3-persistent python3-pythrann python3.12-dev virtualbox dkms virtualbox-qt xt-dev
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 256 not upgraded.

(nam@kali)-[~]
$ 
```

```
~ : zsh — Konsole
File Edit View Bookmarks Plugins Settings Help
New Tab Split View
Copy Paste Find

ship
slip
stivers
tapani
targas
test2
test3
tula
unix
user1
xanth
!@#$%^
1701d
@#$%^&
Qwert
allo
dirk
go
newcourt
nite
notused
sss

(nam@kali)-[~]
$ cat /usr/share/john/password.lst | tail -n 10
1701d
@#$%^&
Qwert
allo
dirk
go
newcourt
nite
notused
sss

(nam@kali)-[~]
$ 
```

~ : zsh — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View

```
ð#%&
Qwert
allo
dirk
go
newcourt
nite
notused
sss

[(nam@kali)-[~]
$ cat /usr/share/john/password.lst | tail -n 10
170ld
ð#%&
Qwert
allo
dirk
go
newcourt
nite
notused
sss

[(nam@kali)-[~]
$ cat rockyou.txt | tail -n 10
1234567
1

xCvBnM,
ie168
abygurl69
a6_123
*7_iVamos!

[(nam@kali)-[~]
$
```

EN Copy Paste Find

19:59 20 May 2024

~ : leafpad — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View

```
dirk
go
newcourt
nite
notused
sss

[(nam@kali)-[~]
$ cat /usr/share/john/password.lst | tail -n 10
170ld
ð#%&
Qwert
allo
dirk
go
newcourt
nite
notused
sss

[(nam@kali)-[~]
$ cat rockyou.txt | tail -n 10
1234567
1

xCvBnM,
ie168
abygurl69
a6_123
*7_iVamos!

[(nam@kali)-[~]
$ leafpad /usr/share/john/password.lst

(Gtk-WARNING **: 20:00:07.610: Unable to locate theme engine in module_path: "adwaita",
[]
```

EN Copy Paste Find

20:00 20 May 2024

~ : leafpad — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View

Copy Paste Find

```
sss
(sss)
$ cat /usr/share/john/password.lst | tail -n 10
1701d
m@$$%^&
Qwert
allo
dirk
go
newcourt
nite
notused
sss

(sss)
$ cat rockyou.txt | tail -n 10
1234567
1

(xCvBnM,
ie168
abygurl69
a6_123
*7;Vamos!

(sss)
$ leafpad /usr/share/john/password.lst

(Gtk:5329): Gtk-WARNING **: 20:00:07.616: Unable to locate theme engine in module_path: "adwaita",
(sss)
$ leafpad rockyou.txt

(Gtk:5362): Gtk-WARNING **: 20:00:29.996: Unable to locate theme engine in module_path: "adwaita",
[ ]
EN 20:00 20 May 2024
```

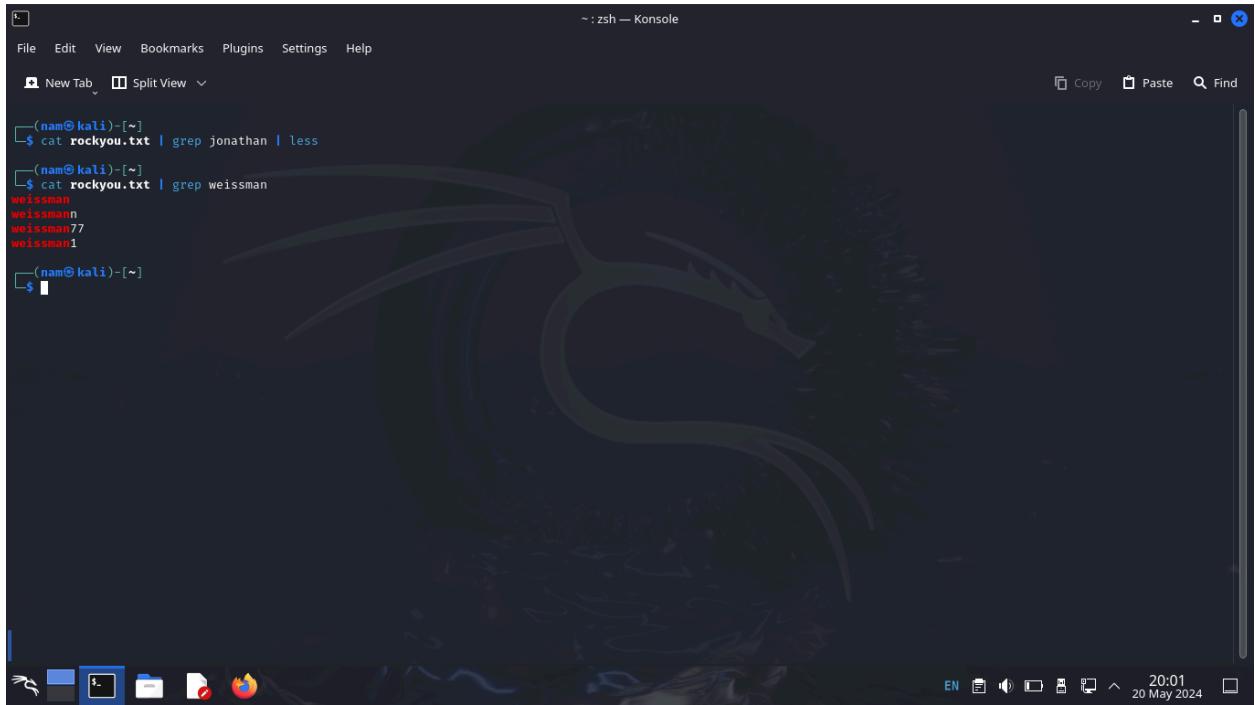
~ : zsh — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View

Copy Paste Find

```
jonathan
jonathan1
jonathan2
jonathan12
jonathan7
jonathan11
jonathan13
jonathan3
jonathanteamo
jonathan01
jonathan21
jonathan22
jonathan16
jonathan8
jonathan18
jonathan5
jonathan123
jonathan!
ilovejonathan
jonathan14
jonathan0
jonathan23
ijonathan
jonathan4
jonathan15
jonathan08
jonathan06
jonathan17
jonathan07
teamojonathan
jonathan9
jonathan6
jonathan.
jonathan24
jonathan69
jonathan19
jonathan04
[ ]
```



~ : zsh — Konsole

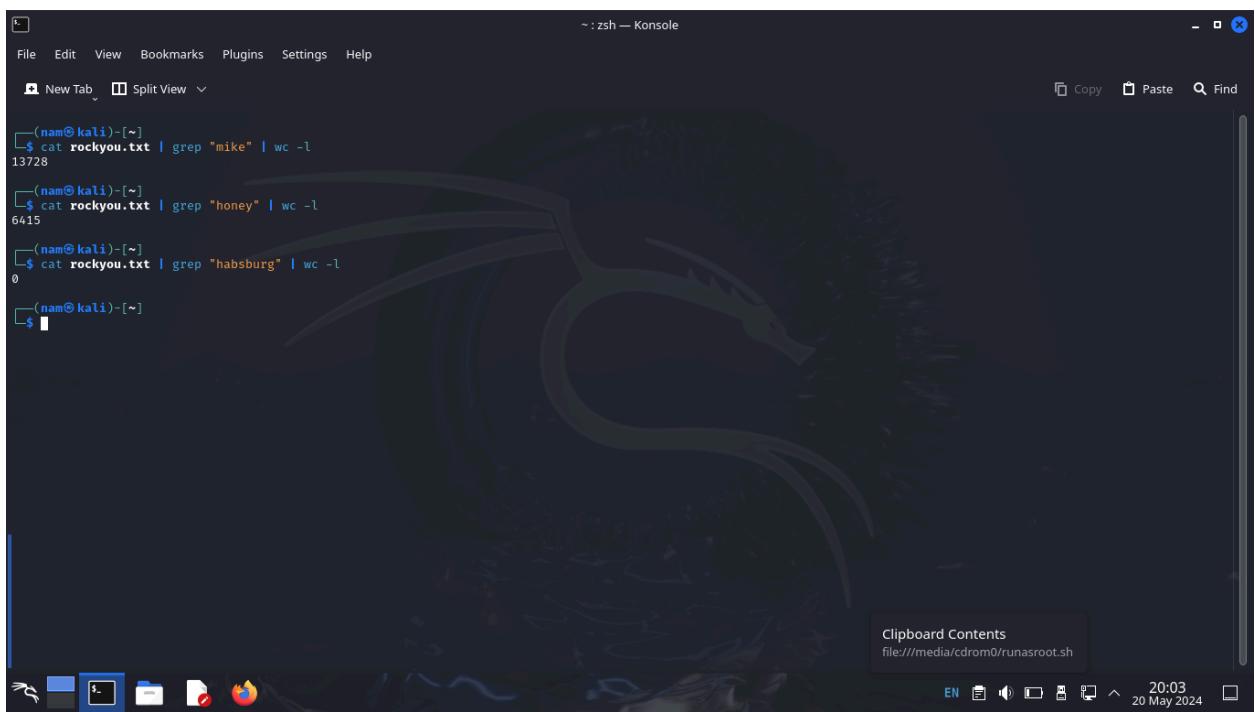
File Edit View Bookmarks Plugins Settings Help

New Tab Split View

```
(nam㉿kali)-[~]
└─$ cat rockyou.txt | grep jonathan | less
(nam㉿kali)-[~]
└─$ cat rockyou.txt | grep weissman
weissman
weissmann
weissmann77
weissman1
(nam㉿kali)-[~]
└─$
```

EN Copy Paste Find

20:01 20 May 2024



~ : zsh — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View

```
(nam㉿kali)-[~]
└─$ cat rockyou.txt | grep "mike" | wc -l
13728
(nam㉿kali)-[~]
└─$ cat rockyou.txt | grep "honey" | wc -l
6415
(nam㉿kali)-[~]
└─$ cat rockyou.txt | grep "habsburg" | wc -l
0
(nam㉿kali)-[~]
└─$
```

Clipboard Contents  
file:///media/cdrom0/runasroot.sh

EN Copy Paste Find

20:03 20 May 2024

```
(nam@kali)-[~]$ sudo useradd mikehoney
(nam@kali)-[~]$ sudo useradd habzburg
(nam@kali)-[~]$ sudo passwd mikehoney
New password:
Retype new password:
passwd: password updated successfully
(nam@kali)-[~]$ sudo passwd habzburg
New password:
Retype new password:
passwd: password updated successfully
(nam@kali)-[~]$
```

The screenshot shows a Kali Linux desktop environment with a terminal window open. The terminal window displays a sequence of commands and their outputs related to user management and password cracking.

```
(nam㉿kali)-[~]
$ sudo useradd mikehoney
(nam㉿kali)-[~]
$ sudo useradd habsburg
(nam㉿kali)-[~]
$ sudo passwd mikehoney
New password:
Retype new password:
passwd: password updated successfully

(nam㉿kali)-[~]
$ sudo passwd habsburg
New password:
Retype new password:
passwd: password updated successfully

(nam㉿kali)-[~]
$ sudo unshadow /etc/passwd /etc/shadow > rochester3.txt

(nam㉿kali)-[~]
$ sudo john --wordlist=rockyou.txt --format=crypt rochester3.txt
Using default input encoding: UTF-8
Loaded 6 password hashes with 6 different salts (crypt, generic crypt(3) [?/64])
Remaining 2 password hashes with 2 different salts
Cost 1 (algorithm [1:descrypt 2:md5crypt 3:summd5 4:bcrypt 5:sha256crypt 6:sha512crypt]) is 0 for all loaded hashes
Cost 2 (algorithm specific iterations) is 1 for all loaded hashes
Will run 8 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
0g 0:00:02:28 0.14% (ETA: 2024-05-22 00:45) 0g/s 167.0p/s 334.6c/s 334.6C/s marvic..dandy
0g 0:00:03:02 0.17% (ETA: 2024-05-22 02:02) 0g/s 160.1p/s 320.7c/s 320.7C/s shalala..matthew11
0g 0:00:03:05 0.17% (ETA: 2024-05-22 02:09) 0g/s 159.6p/s 319.7c/s 319.7C/s 171087..switzerland
0g 0:00:03:15 0.18% (ETA: 2024-05-22 02:18) 0g/s 158.8p/s 318.2c/s 318.2C/s eyeballs..angel4ever
0g 0:00:03:18 0.18% (ETA: 2024-05-22 02:18) 0g/s 158.5p/s 317.6c/s 317.6C/s komang..eleonor
Session aborted
```

11.02

~ : man — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

**CRUNCH(1)** General Commands Manual **CRUNCH(1)**

**NAME**  
crunch - generate wordlists from a character set

**SYNOPSIS**  
crunch <min-len> <max-len> [<charset string>] [options]

**DESCRIPTION**  
Crunch can create a wordlist based on criteria you specify. The output from crunch can be sent to the screen, file, or to another program. The required parameters are:

**min-len**  
The minimum length string you want crunch to start at. This option is required even for parameters that won't use the value.

**max-len**  
The maximum length string you want crunch to end at. This option is required even for parameters that won't use the value.

**charset string**  
You may specify character sets for crunch to use on the command line or if you leave it blank crunch will use the default character sets. The order **MUST BE** lower case characters, upper case characters, numbers, and then symbols. If you don't follow this order you will not get the results you want. You **MUST** specify either values for the character type or a plus sign. **NOTE:** If you want to include the space character in your character set you must escape it using the \ character or enclose your character set in quotes i.e. "abc ". See the examples 3, 11, 12, and 13 for examples.

**OPTIONS**

**-b number[type]**  
Specifies the size of the output file, only works if -o START is used, i.e.: 60MB. The output files will be in the format of starting letter-ending letter for example: ./crunch 4 5 -b 20mib -o START will generate 4 files: aaaa-gvfed.txt, gyfee-ombqy.txt, ombqz-wcydt.txt, wcydu-zzzzz.txt valid values for type are kb, mb, gb, kib, mib, and gib. The first three types are based on 1000 while the last three types are based on 1024. **NOTE** There is no space between the number and type. For example 500mb is correct 500 mb is NOT correct.

**-c number**  
Specifies the number of lines to write to output file, only works if -o START is used, i.e.: 60. The output files will be in the format of starting letter-ending letter for example: ./crunch 1 1 -f /pentest/password/crunch/charset.lst mixalpha-numeric-all-space -o START -c 60 will result in 2 files: a-7.txt and B-1.txt. The reason for the slash in the second filename is the ending character is space and ls has to escape it to print it. Yes you will need to put in the \ when specifying the filename because the last character is a space.

**-d numbersymbol**  
Limits the number of duplicate characters. -d 20 limits the lower case alphabet to output like aab and aac. aaa would not be generated as that is 3 consecutive letters of a. The format is number then symbol where number is the maximum number of consecutive characters and symbol is the symbol of the the character set you want to limit i.e. @,%^ . See examples 17-19.

**-e string**  
Specifies when crunch should stop early

**-f /path/to/charset.lst charset-name**  
Specifies a character set from the charset.lst

**-i** Inverts the output so instead of aaa,aab,aac,aad, etc you get aaa,baa,caa,daa,aba,bba, etc

**-l** When you use the -t option this option tells crunch which symbols should be treated as literals. This will allow you to use the placeholders as letters in the pattern. The -l option should be the same length as the -t option. See example 15.

**-m** Merged with -p. Please use -p instead.

**-o wordlist.txt**  
Specifies the file to write the output to, eg: wordlist.txt

**-p charset OR -p word1 word2 ...**  
Tells crunch to generate words that don't have repeating characters. By default crunch will generate a wordlist size of #of\_chars\_in\_charset ^ max\_length. This option will instead generate #of\_chars\_in\_charset!. The ! stands for factorial. For example say the charset is abc and max length is 4.. Crunch will by default generate  $3^4 = 81$  words. This option will instead generate  $3! = 3 \times 2 \times 1 = 6$  words (abc, acb, bac, bca, cab, cba). **THIS MUST BE THE LAST OPTION!** This option CANNOT be used with -s and it ignores min and max length however you must still specify two numbers.

**-q filename.txt**  
Tells crunch to read filename.txt and permute what is read. This is like the -p option except it gets the input from filename.txt.

**-r** Tells crunch to resume generate words from where it left off. -r only works if you use -o. You must use the same command as the original command used to generate the words. The only exception to this is the -s option. If your original command used the -s option you **MUST** remove it before you resume the session. Just add -r to the end of the original command.

**-s startblock**  
Manual page **crunch(1)** line 1 (press h for help or q to quit)

EN 15:52 14 May 2024

A screenshot of a Kali Linux desktop environment. In the foreground, a terminal window titled "crunch — Konsole" is open, showing the output of the "crunch" command. The terminal shows the following text:

```
(nam@kali)-[~]
$ crunch
crunch version 3.6

Crunch can create a wordlist based on criteria you specify. The output from crunch can be sent to the screen, file, or to another program.

Usage: crunch <min> <max> [options]
where min and max are numbers

Please refer to the man page for instructions and examples on how to use crunch.

(nam@kali)-[~]
$ crunch 1 8
Crunch will now generate the following amount of data: 1945934118544 bytes
185787 MB
1812 GB
1 TB
0 PB
Crunch will now generate the following number of lines: 217180147158
```

The desktop background features a green dragon logo. At the bottom, the Kali Linux taskbar is visible with icons for terminal, file manager, and browser, along with system status indicators like battery level and network.

A screenshot of a Kali Linux terminal window titled "zsh — Konsole". The terminal shows the results of a password cracking session using the "Crunch" tool. The user has generated a wordlist containing various permutations of the letters "abcdefg". The terminal also displays the memory usage and the number of lines generated by the tool.

File Edit View Bookmarks Plugins Settings Help

New Tab Split View

Copy Paste Find

```
gggfee
gggfef
gggfeg
gggffa
gggffb
gggffc
gggffd
gggffe
gggfff
gggfg
gggfga
gggfgb
gggfgc
gggfgd
gggfgf
gggfgg
ggggaa
ggggab
ggggac
ggggad
ggggae
ggggaf
ggggag
ggggba
ggggbb
ggggbc
ggggbd
ggggbe
ggggbf
ggggbg
ggggca
ggggcb
ggggcc
ggggcd
ggggce
ggggcf
ggggcg
ggggda
ggggdb
ggggdc
ggggdd
ggggde
ggggdf
ggggdg
gggg ea
gggg eb
gggg ec
gggg ed
gggg ee
gggg ef
gggg eg
gggg fa
gggg fb
gggg fc
gggg fd
gggg fe
gggg ff
gggg fg
gggg ga
gggg gb
gggg gc
gggg gd
gggg ge
gggg gf
gggg gg
Crunch will now generate the following amount of data: 937923 bytes
0 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 137256
```

File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

```
g f
g g
g aa
ab
ac
ad
ae
af
ag
a
ba
bb
bc
bd
be
bf
bg
b
ca
cb
cc
cd
ce
cf
cg
c
da
db
dc
dd
de
df
dg
d
ea
eb
ec
ed
ee
ef
eg
e
fa
fb
fc
fd
fe
ff
fg
f
ga
gb
gc
gd
ge
gf
gg
g
a
b
c
d
e
f
g
```

(nam@kali)-[~]

```
$ crunch 4 5 -p abc
Crunch will now generate approximately the following amount of data: 24 bytes
0 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 6
```

EN 16:00 14 May 2024

File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

```
ce
cf
cg
c
da
db
dc
dd
de
df
dg
d
ea
eb
ec
ed
ee
ef
eg
e
fa
fb
fc
fd
fe
ff
fg
f
ga
gb
gc
gd
ge
gf
gg
g
a
b
c
d
e
f
g
```

(nam@kali)-[~]

```
$ crunch 4 5 -p abc
Crunch will now generate approximately the following amount of data: 24 bytes
0 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 6
abc
acb
bac
bca
cab
cba
```

(nam@kali)-[~]

```
$ crunch 4 5 -p dog cat bird
Crunch will now generate approximately the following amount of data: 66 bytes
0 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 6
birdcatdog
birddogcat
catbirddog
catdogbird
dogbirdcat
dogcatbird
```

(nam@kali)-[~]

```
$
```

A screenshot of a Kali Linux desktop environment. The background features a dark green dragon-themed wallpaper. A Konsole window is open in the foreground, showing terminal output from the 'crunch' command. The desktop bar at the bottom includes icons for a terminal, file manager, and web browser, along with system status indicators like battery level and date/time.

A screenshot of a Kali Linux desktop environment. At the top, there's a standard Linux-style menu bar with options like File, Edit, View, Bookmarks, Plugins, Settings, and Help. Below the menu is a toolbar with icons for New Tab, Split View, Copy, Paste, and Find. The main workspace contains a terminal window on the left and a Leafpad text editor window on the right. The terminal window shows a command-line session where the user runs 'crunch' to generate a password list ('weissman.txt') and then installs it using 'leafpad'. The Leafpad window displays the contents of 'weissman.txt', which is a list of lowercase letters from 'zzi' to 'zzz'. The desktop taskbar at the bottom shows icons for various applications like a file manager, browser, and terminal.



The screenshot shows a Kali Linux desktop environment with a terminal window open in Konsole. The terminal window has a dark background and displays the following command and its output:

```
(nam@kali)-[~] leafpad  
$ crunch 8 8 -f /usr/share/crunch/charset.lst mixalpha-numeric  
Loading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
libaiol libatl11-adapter libboost1.72-dev libopenblas-dev libopenblas-pthread-dev libopenblas0 libpython3-all-dev libpython3.12  
libpython3.12-dev libisim0-dev python3-all-dev python3-isim python3-isimget python3-gest python3-pyatspi python3-pypdf3 python3-pypeteer  
python3-pyrsistent pythons-pyinotify pythons.12-dev x11-dev  
Use 'sudo apt autoremove' to remove them.  
Suggested packages:  
gvinec-gtk  
The following NEW packages will be installed:  
leafpad  
Upgraded, 0 newly installed, 0 to remove and 257 not upgraded.  
Need to get 99.9 kB of archives.  
After this operation, 465 kB of additional disk space will be used.  
[Download from http://mirror.kku.ac.th/kali/kali-rolling/main amd64 leafpad amd64 0.8.18.1-5 [99.9 kB]  
Fetching 99.9 kB in 2s (50.7 kB/s)  
Selecting previously unselected package leafpad.  
Reading database ... 440783 files and directories currently installed.  
Preparing to unpack .../leafpad_0.8.18.1-5_amd64.deb ...  
Extracting leafpad (0.8.18.1-5) ...  
update-alternatives: using /usr/bin/leafpad to provide /usr/bin/gnome-text-editor (gnome-text-editor) in auto mode  
Processing triggers for desktop-file-utils (0.27-1) ...  
Processing triggers for hicolor-icon-theme (0.17-3) ...  
Processing triggers for man-db (2.12.0-3) ...  
Processing triggers for kali-menu (023.4.7) ...  
(nam@kali)-[~]
```

The desktop interface includes a dock at the bottom with icons for terminal, file manager, browser, and system tools. The system tray shows network status, battery level, volume, and date/time (16:03, 14 May 2024).

The screenshot shows a Kali Linux desktop environment with a terminal window open in Konsole. The terminal window has a dark background and displays a large amount of text output from the 'leafpad' command. The text includes various log entries such as package installation, removal, and configuration. It also shows the 'Crunch' password cracking tool being used to generate a mixalpha-numeric-all-space password. The terminal window has a standard KDE-style interface with tabs, a menu bar, and a toolbar at the bottom.

```
~:zsh — Konsole
File Edit View Bookmarks Plugins Settings Help
New Tab Split View
aaacesLo leafpad
aaacesLp leafpad install leafpad
aaacesLq sword for nam:
aaacesLr package lists... Done
aaacesLs dependency tree... Done
aaacesLt state information... Done
aaacesLu owing packages were automatically installed and are no longer required:
aaacesLv libatpi-adapter libboost-dev libboost1.82-dev libopenblas-dev libopenblas-dev libpython3-all-dev libpython3.12 libpython3.12-dev libpython3.12
aaacesLw libcurl4-openssl-dev libcurl4-openssl-dev python3-all-dev python3-anyjson python3-beautifulsoup4 python3-gast python3-pyatspi python3-pypdf3 python3-pypeteer
aaacesLx pydisruptive python3-pydran python3.12-dev x11-dev
aaacesLy aut autoremove to remove them.
aaacesLz packages:
aaacesLg gtk
aaacesLb owing NEW packages will be installed:
aaacesLc
aaacesLd 1 newly installed, 0 to remove and 257 not upgraded.
aaacesLe 0B in 0B of archives.
aaacesLf 0B operation, 465 kB of additional disk space will be used.
aaacesLG http://mirror.kku.ac.th/kali kali-rolling/main amd64 leafpad amd64 0.8.18.1-5 [90.9 kB]
aaacesIH 90.9 kB in 2s (50.7 kB/s)
aaacesJ previously unselected package leafpad.
aaacesLK database ... 440783 files and directories currently installed.
aaacesLL to unpack .../leafpad 0.8.18.1-5 amd64.deb ...
aaacesLM leafpad (0.8.18.1-5) ...
aaacesLN leafpad (0.8.18.1-5) ...
aaacesLO leafpad test using /usr/bin/leafpad to provide /usr/bin/gnome-text-editor (gnome-text-editor) in auto mode
aaacesLP triggers for desktop-file-utils (0.27-1) ...
aaacesQ triggers for hicolor-icon-theme (0.17-3) ...
aaacesR triggers for man-db (2.12.0-3) ...
aaacesS triggers for kali-menu (0.23.4.7) ...
aaacesT
aaacesU kali-rolling
aaacesLV
aaacesLW
aaacesLX
aaacesLY
aaacesLZ
aaacesL0
aaacesL1
aaacesL2
aaacesL3
aaacesL4
aaacesL5
aaacesL6
aaacesL7
aaacesL8
aaacesL9
aaacesMa
aaacesMb
aaacesMc
aaacesMd
aaacesMe
aaacesMf
aaacesMg
aaacesMh
aaacesMi
aaacesMj
aaacesMk
aaacesMl
aaacesMm
aaacesMn
aaacesMo
aaacesMp
aaacesMq
^Caaaces5d
Crunch ending at aaaces5d
(nam@kali)-[~]
$ crunch 8 8 -f /usr/share/crunch/charset.lst mixalpha-numeric-all-space
Crunch will now generate the following amount of data: 59707838816015625 bytes
56941832366 MB
55607258 GB
54303 TB
53 PB
Crunch will now generate the following number of lines: 6634204312890625
```

~ :zsh — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

```
aaaapdIx leafpad
aaaapdIy will install leafpad
aaaapdIz sword for nam:
aaaapdIA package lists... Done
aaaapdIB dependency tree... Done
aaaapdIC state information... Done
aaaapdID owing packages were automatically installed and are no longer required:
aaaapdIE libatpi-adapter libboost-dev libboost1.82-dev libopenblas-dev libpthread-dev libopenblas-dev libpython3-all-dev libpython3.12 libpython3-all-dev libpython3-anyjson python3-beniget python3-gest python3-pyatspi python3-pypdf3 python3-puppeteer
aaaapdIG pydisrupter python3-pythrak python3.12-dev x11-dev
aaaapdIH autoremove to remove them.
aaaapdII packages:
aaaapdIJ gtk
aaaapdIK owing NEW packages will be installed:
aaaapdIL
aaaapdIM 1 newly installed, 0 to remove and 257 not upgraded.
aaaapdIN 0B in 0B of archives.
aaaapdIO 0B operation, 465 kB of additional disk space will be used.
aaaapdIP http://mirror.kali.org/kali/kali-rolling/main amd64 leafpad 0.8.18.1-5 [90.9 kB]
aaaapdIR 90.9 kB in 2s (50.7 kB/s)
aaaapdIS previously unselected package leafpad.
aaaapdIT database ... 440783 files and directories currently installed.
aaaapdIU to unpack .../leafpad 0.8.18.1-5_amd64.deb ...
aaaapdIV leafpad (0.8.18.1-5) ...
aaaapdIW leafpad (0.8.18.1-5) ...
aaaapdIX alternatives: Using /usr/bin/leafpad to provide /usr/bin/gnome-text-editor (gnome-text-editor) in auto mode
aaaapdIY triggers for desktop-file-utils (0.27-1) ...
aaaapdIZ triggers for hicolor-icon-theme (0.17-3) ...
aaaapdI@ triggers for man-db (2.12.0-3) ...
aaaapdI1 triggers for kali-menu (0.23.4.7) ...
aaaapdI2
aaaapdI3 kali: ~
aaaapdI4
aaaapdI5
aaaapdI6
aaaapdI7
aaaapdI8
aaaapdI9
aaaapdI!
aaaapdI@
aaaapdI#
aaaapdI$
aaaapdI%
aaaapdI^
aaaapdI&
aaaapdI*
aaaapdI(
aaaapdI)
aaaapdI-
aaaapdI_
aaaapdI+
aaaapdI=
aaaapdI-
aaaapdI'
aaaapdI[
aaaapdI]
aaaapdI{
aaaapdI}
aaaapdI]
aaaapdI\
aaaapdI:
aaaapdI;
aaaapdI"
aaaapdI'
^CaaaapdI>
Crunch ending at aaaapdI>
```

(nam@kali)-[~]

```
$ crunch 8 8 -t 亂碼乱415 -f /usr/share/crunch/charset.lst mixalpha-numeric-all-space
Crunch will now generate the following amount of data: 733055625 bytes
699 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 81450625
```

EN 16:05 14 May 2024

~ :zsh — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

```
-7{k0415
-7{l0415
-7{m0415
-7{n0415
-7{o0415
-7{p0415
-7{q0415
-7{r0415
-7{s0415
-7{t0415
-7{u0415
-7{v0415
-7{w0415
-7{x0415
-7{y0415
-7{z0415
-7{C0415
-7{D0415
-7{E0415
-7{G0415
-7{H0415
-7{I0415
-7{J0415
-7{K0415
-7{L0415
-7{M0415
-7{N0415
-7{P0415
-7{Q0415
-7{R0415
-7{S0415
-7{T0415
-7{U0415
-7{V0415
-7{W0415
-7{X0415
-7{Y0415
-7{Z0415
-7{00415
-7{10415
-7{20415
-7{30415
-7{40415
-7{50415
-7{60415
-7{70415
-7{80415
-7{90415
-7{#0415
-7{$0415
-7%0415
-7{^0415
-7{&0415
-7{s0415
Crunch ending at -7{s0415
^C
```

```
(nam@kali)-[~]
$ crunch 8 8 -t alice0000 -f /usr/share/crunch/charset.lst mixalpha-numeric-all-space
The maximum and minimum length should be the same size as the pattern you specified.
min = 8 max = 8 strlen(alice0000)=9
```

```
(nam@kali)-[~]
$ crunch 8 8 -t alice0000 -f /usr/share/crunch/charset.lst mixalpha-numeric-all-space
Crunch will now generate the following amount of data: 7716375 bytes
7 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 857375
```



```
(nam@kali)-[~]
└$ sudo adduser mike
info: Adding user `mike' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `mike' (1001) ...
info: Adding new user `mike' (1001) with group `mike (1001)' ...
warn: The home directory `/home/mike' already exists. Not touching this directory.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for mike
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
info: Adding new user `mike' to supplemental / extra groups `users' ...
info: Adding user `mike' to group `users' ...

(nam@kali)-[~]
└$ sudo adduser honey
info: Adding user `honey' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `honey' (1002) ...
info: Adding new user `honey' (1002) with group `honey (1002)' ...
warn: The home directory `/home/honey' already exists. Not touching this directory.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for honey
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []
Is the information correct? [Y/n] y
info: Adding new user `honey' to supplemental / extra groups `users' ...
info: Adding user `honey' to group `users' ...

(nam@kali)-[~]
└$
```



File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

```
(nam㉿kali)-[~]
└$ sudo adduser mike
info: Adding user `mike' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `mike' (1001) ...
info: Adding new user `mike' (1001) with group `mike (1001)' ...
warn: The home directory `/home/mike' already exists. Not touching this directory.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for mike
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
info: Adding new user `mike' to supplemental / extra groups `users' ...
info: Adding user `mike' to group `users' ...

(nam㉿kali)-[~]
└$ sudo adduser honey
info: Adding user `honey' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `honey' (1002) ...
info: Adding new user `honey' (1002) with group `honey (1002)' ...
warn: The home directory `/home/honey' already exists. Not touching this directory.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for honey
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []
Is the information correct? [Y/n] y
info: Adding new user `honey' to supplemental / extra groups `users' ...
info: Adding user `honey' to group `users' ...

(nam㉿kali)-[~]
└$ crunch 5 5 -f /usr/share/crunch/charset.lst mixalpha-numeric -o rochester4.txt
Crunch will now generate the following amount of data: 5496796992 bytes
5242 MB
5 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 916132832

crunch: 14% completed generating output
crunch: 28% completed generating output
crunch: 45% completed generating output
crunch: 61% completed generating output
crunch: 78% completed generating output
crunch: 95% completed generating output
crunch: 100% completed generating output

(nam㉿kali)-[~]
└$
```

File Edit View Bookmarks Plugins Settings Help

New Tab Split View

```
[nam@kali)-[~]
$ tail -n 100 rochester4.txt
9998y
9998z
9998A
9998B
9998C
9998D
9998E
9998F
9998G
9998H
9998I
9998J
9998K
9998L
9998M
9998N
9998O
9998P
9998Q
9998R
9998S
9998T
9998U
9998V
9998W
9998X
9998Y
9998Z
99980
99981
99982
99983
99984
99985
99986
99987
99988
99989
9999a
9999b
9999c
9999d
9999e
9999f
```

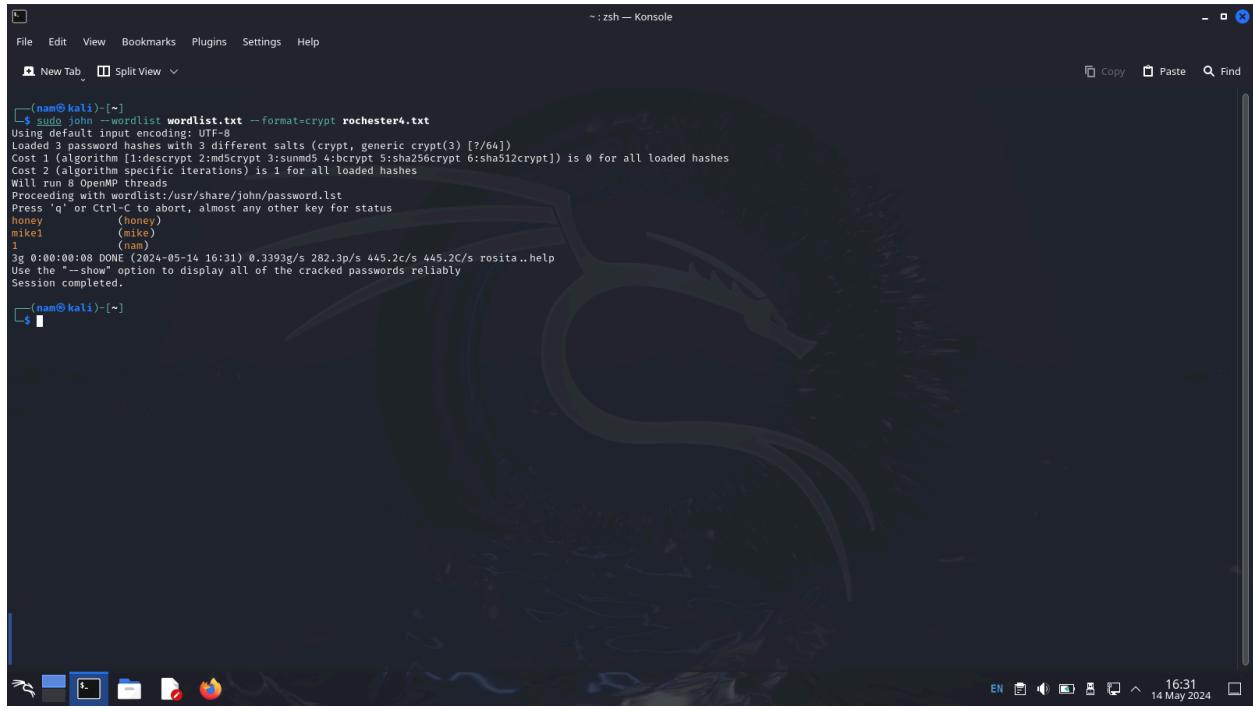
EN 16:23 14 May 2024

File Edit View Bookmarks Plugins Settings Help

New Tab Split View

```
[nam@kali)-[~]
$ crunch 5 5 -f /usr/share/crunch/charset.lst mixalpha-numeric -o wordlist.txt
Crunch will now generate the following amount of data: 5496796992 bytes
5242 MB
5 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 916132832
crunch: 14% completed generating output
crunch: 23% completed generating output
crunch: 27% completed generating output
crunch: 31% completed generating output
crunch: 45% completed generating output
crunch: 63% completed generating output
crunch: 81% completed generating output
crunch: 99% completed generating output
crunch: 100% completed generating output
[nam@kali)-[~]
$ unshadow /etc/passed /etc/shadow > rochester4.txt
Created directory: /home/nam/.john
Fopen: /etc/shadow: Permission denied
[nam@kali)-[~]
$ sudo unshadow /etc/passwd /etc/shadow > rochester4.txt
[sudo] password for nam:
Created directory: /root/.john
[nam@kali)-[~]
$
```

EN 16:30 14 May 2024



A screenshot of a Kali Linux desktop environment. The main window is a terminal titled "zsh — Konsole" showing the output of a John the Ripper password cracking session. The session summary indicates that 3 passwords were cracked from a wordlist of 1 password. The cracked passwords are listed as "honey", "mikew1", and "1". The terminal window includes standard file menu options like File, Edit, View, Bookmarks, Plugins, Settings, Help, and tabs for New Tab and Split View. The desktop bar at the bottom shows various icons for system functions like network, battery, and volume, along with the date and time (14 May 2024, 16:31).

```
(nam㉿kali)-[~]
$ sudo john --wordlist=wordlist.txt --format=crypt rochester4.txt
Using 8 threads, input encoding: UTF-8
Loaded 3 password hashes with 3 different salts (crypt, generic crypt(3) [?/64])
Cost 1 (algorithm [1:descrypt 2:md5crypt 3:sunmd5 4:bcrypt 5:sha256crypt 6:sha512crypt]) is 0 for all loaded hashes
Cost 2 (algorithm specific iterations) is 1 for all loaded hashes
Will run 8 OpenMP threads
Proceeding with wordlist:/usr/share/john/password.lst
Press 'q' or Ctrl-C to abort, almost any other key for status
honey      (honey)
mikew1    (@mike)
1          (@nam)
3g 0:00:00:00:08 DONE (2024-05-14 16:31) 0.3393g/s 282.3p/s 445.2c/s 445.2C/s rosita..help
Use the "--show" option to display all of the cracked passwords reliably
Session completed.

(nam㉿kali)-[~]
$
```

File Edit View Bookmarks Plugins Settings Help

~ : zsh — Konsole

New Tab Split View Copy Paste Find

```
(nam㉿kali)-[~]
└─$ sudo passwd scott
New password:
Retype new password:
passwd: password updated successfully

(nam㉿kali)-[~]
└─$ sudo unshadow /etc/passwd /etc/shadow > rochester5.txt

(nam㉿kali)-[~]
└─$ sudo crunch 4 4 | sudo john --format=crypt rochester5.txt --stdin
Crunch will now generate the following amount of data: 2284880 bytes
2 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 456976
Using default input encoding: UTF-8
Loaded 4 password hashes with 4 different salts (crypt, generic crypt(3) [?/64])
Remaining 1 password hash
Cost 1 (algorithm [1:descrypt 2:md5crypt 3:sunmd5 4:bcrypt 5:sha256crypt 6:sha512crypt]) is 0 for all loaded hashes
Cost 2 (algorithm specific iterations) is 1 for all loaded hashes
Will run 8 OpenMP threads
Press Ctrl-C to abort, or send SIGUSR1 to john process for status
ahqz          (scott)
1g 0:00:00:14  0.06858g/s 355.5p/s 355.5C/s ahns..ahrj
Use the "--show" option to display all of the cracked passwords reliably
Session completed.

(nam㉿kali)-[~]
└─$
```

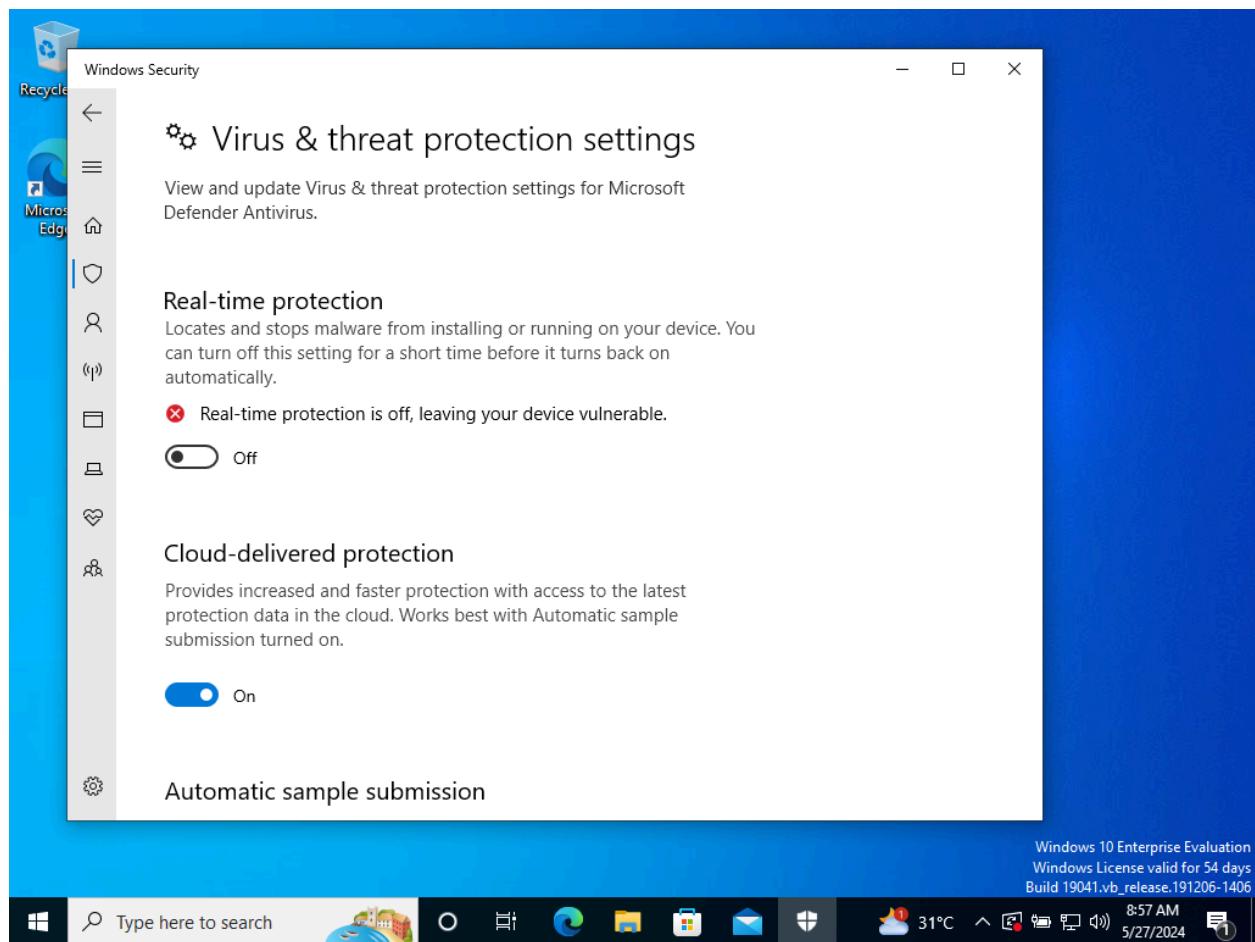
```
File Edit View Bookmarks Plugins Settings Help
New Tab Split View
(nam㉿kali)-[~]
$ sudo passwd scott
[sudo] password for nam:
Sorry, try again.
[sudo] password for nam:
New password:
Retype new password:
passwd: password updated successfully
[nam㉿kali)-[~]
$ sudo unshadow /etc/passwd /etc/shadow > rochester5.txt
[nam㉿kali)-[~]
$ vim
(nam㉿kali)-[~]
$ sudo crunch 3 3 | sudo john --format=crypt rochester6.txt --stdin
Crunch will now generate the following amount of data: 70304 bytes
0 MB
0 GB
0 TB
0 PB
Using default input encoding: UTF-8
Loaded 4 password hashes with 4 different salts (crypt, generic crypt(3) [?/64])
Remaining 1 password hash
Cost 1 (algorithm [1:descrypt 2:md5crypt 3:sunmd5 4:bcrypt 5:sha256crypt 6:sha512crypt]) is 0 for all loaded hashes
Cost 2 (algorithm specific iterations) is 1 for all loaded hashes
Will run 8 OpenMP threads
Crash recovery file is locked: /root/.john/john.rec

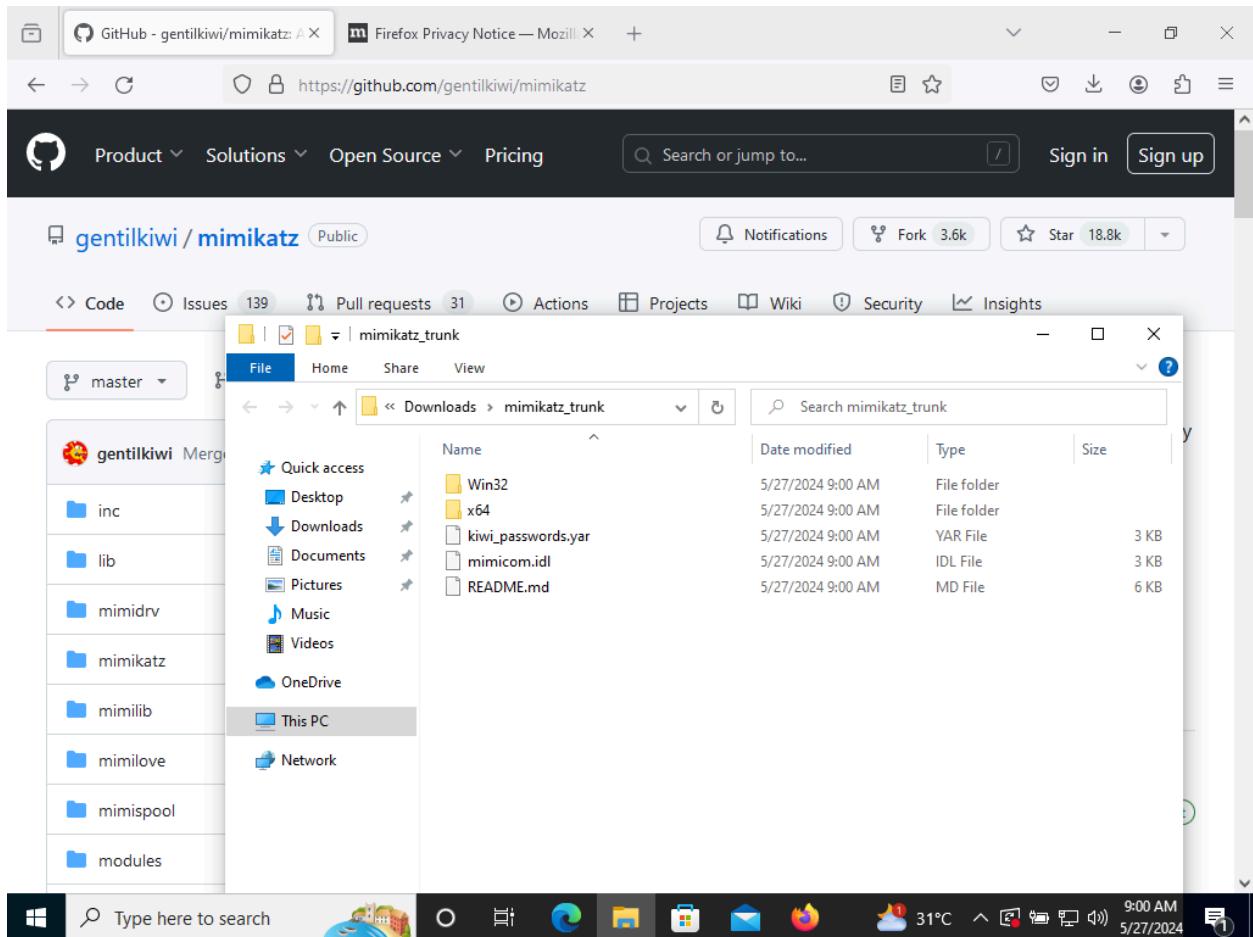
(nam㉿kali)-[~]
$ sudo crunch 3 3 | sudo john --format=crypt rochester6.txt --stdin
Crunch will now generate the following amount of data: 70304 bytes
0 MB
0 GB
0 TB
0 PB
Crunch will now generate the following amount of data: 2284800 bytes
Crunch will now generate the following number of lines: 17576
Using default input encoding: UTF-8
Loaded 4 password hashes with 4 different salts (crypt, generic crypt(3) [?/64])
Remaining 1 password hash
Cost 1 (algorithm [1:descrypt 2:md5crypt 3:sunmd5 4:bcrypt 5:sha256crypt 6:sha512crypt]) is 0 for all loaded hashes
Cost 2 (algorithm specific iterations) is 1 for all loaded hashes
Will run 8 OpenMP threads
Crash recovery file is locked: /root/.john/john.rec

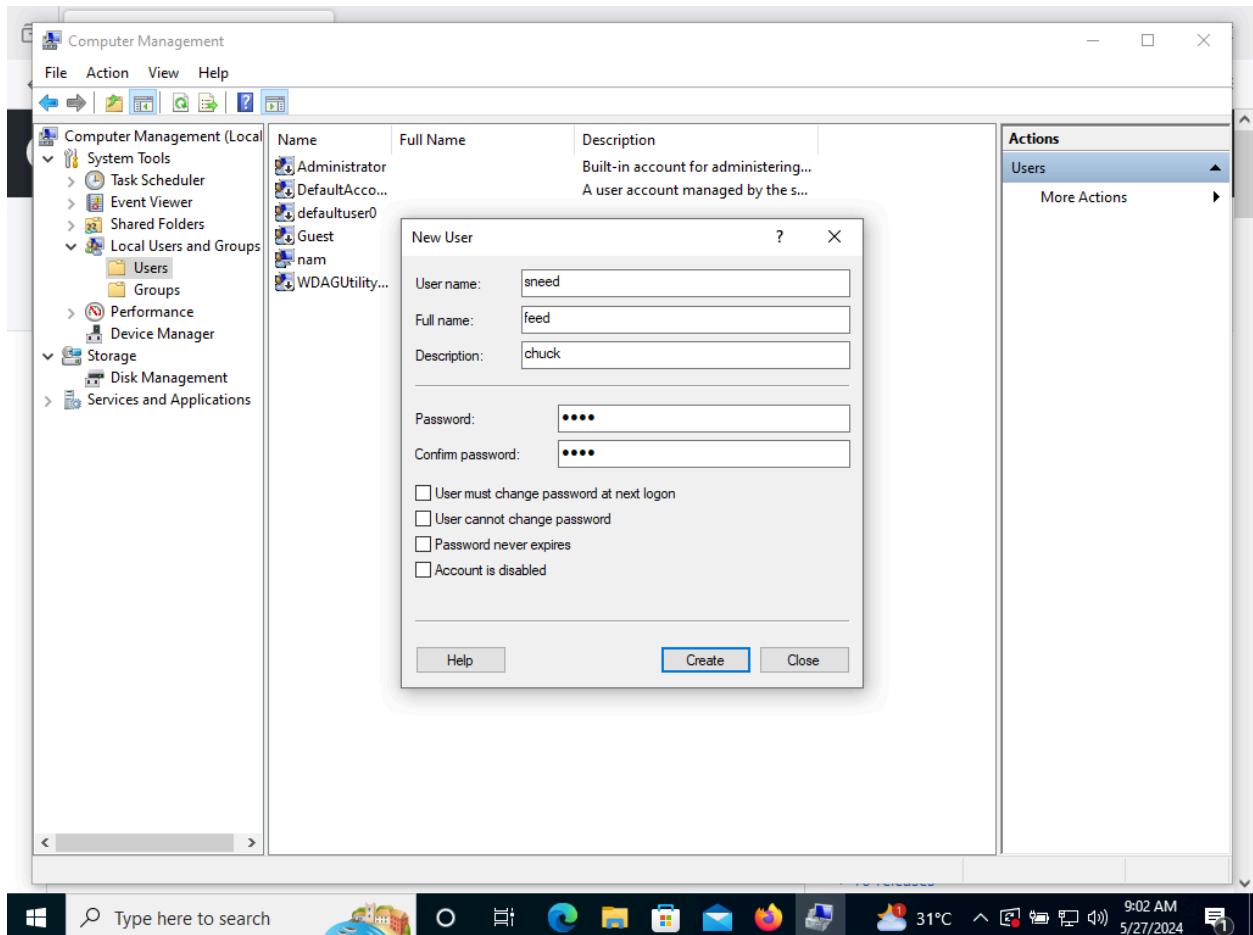
(nam㉿kali)-[~]
$ sudo crunch 3 3 | sudo john --format=crypt rochester6.txt --stdin
Crunch will now generate the following amount of data: 70304 bytes
0 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 17576
Using default input encoding: UTF-8
Loaded 4 password hashes with 4 different salts (crypt, generic crypt(3) [?/64])
Remaining 1 password hash
Cost 1 (algorithm [1:descrypt 2:md5crypt 3:sunmd5 4:bcrypt 5:sha256crypt 6:sha512crypt]) is 0 for all loaded hashes
Cost 2 (algorithm specific iterations) is 1 for all loaded hashes
Will run 8 OpenMP threads
Press Ctrl-C to abort, or send SIGUSR1 to john process for status
zzz (scott)
ig 0:00:00:58 0.01709g/s 300.4p/s 300.4c/s 300.4C/s zzz..zzz
Use the "--show" option to display all of the cracked passwords reliably [?/64]
Session completed.
Cost 1 (algorithm [1:descrypt 2:md5crypt 3:sunmd5 4:bcrypt 5:sha256crypt 6:sha512crypt]) is 0 for all loaded hashes
(nam㉿kali)-[~]
$ 
Press Ctrl-C to abort, or send SIGUSR1 to john process for status
Crunch ending at tmon
ig 0:00:04:31 0g/s 323.0p/s 323.0c/s 323.0C/s face..fafv
Session aborted

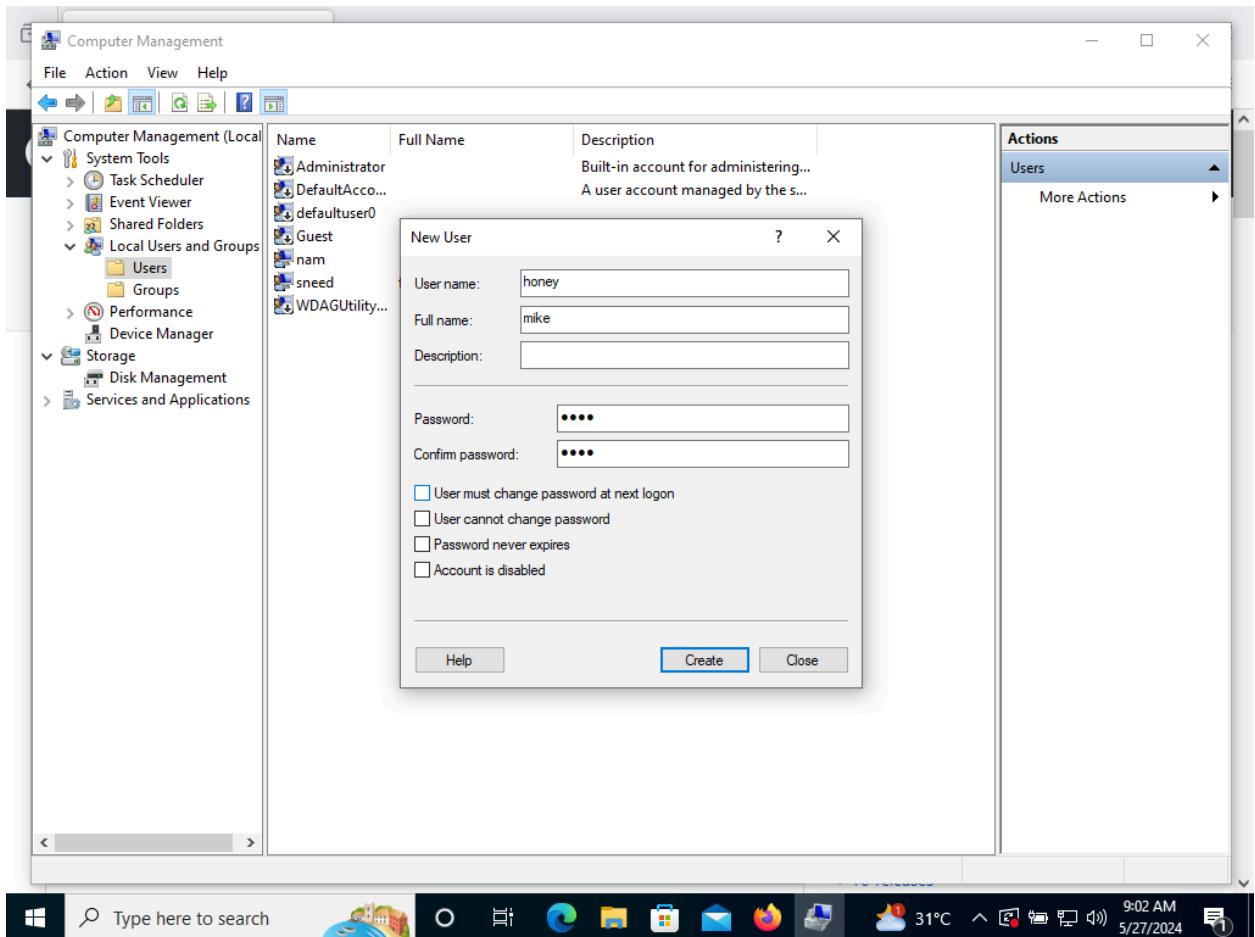
nam㉿kali)-[~]
```

11.03









```
mimikatz 2.2.0 x64 (oe.eo)

mimikatz # privilege::debug
Privilege '20' OK

mimikatz # token::elevate
Token Id : 0
User name :
SID name : NT AUTHORITY\SYSTEM

644 {0;000003e7} 1 D 23812          NT AUTHORITY\SYSTEM      S-1-5-18      (04g,21p)      Primary
-> Impersonated !
* Process Token : {0;00049570} 1 F 21023605    DESKTOP-BSUP848\nam    S-1-5-21-3690152112-4110089468-4187489721-1001  (14g,
24p)      Primary
* Thread Token : {0;000003e7} 1 D 21587135    NT AUTHORITY\SYSTEM      S-1-5-18      (04g,21p)      Impersonation (Delega
tion)

mimikatz # log hashes.txt
Using 'hashes.txt' for logfile : OK

mimikatz # lsadump::sam sam.hiv system.hiv
Domain : DESKTOP-BSUP848
SysKey : 2b75dbf3ba9956b9d5620a0d061d974f
Local SID : S-1-5-21-3690152112-4110089468-4187489721

SAMKey : 3ad04a6e8472e8b665eb28ec2dd5fa29

RID : 000001f4 (500)
User : Administrator

RID : 000001f5 (501)
User : Guest

RID : 000001f7 (503)
User : DefaultAccount

RID : 000001f8 (504)
User : WDAGUtilityAccount
Hash NTLM: 7406ecd87f378a49cba75ab739e83ebf

Supplemental Credentials:
* Primary:NTLM-Strong-NTOWF *
  Random Value : 1c90b4f020d7c6b99d291d9a7f3e7493

* Primary:Kerberos-Newer-Keys *
```

```
hashes - Notepad
File Edit Format View Help

* Packages *
NTLM-Strong-NTOWF

* Primary:Kerberos *
Default Salt : DESKTOP-BSUP848nam
Credentials
des_cbc_md5      : 1679fb23f8a1688f
OldCredentials
des_cbc_md5      : 1679fb23f8a1688f

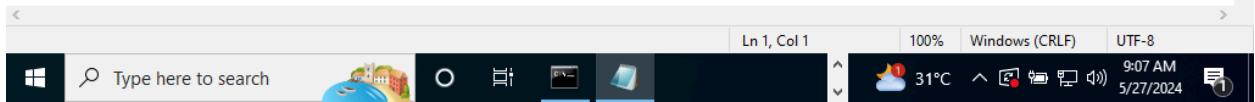
RID : 000003ea (1002)
User : sneed
Hash NTLM: ad831d13f394a1541c650feef2c66c6c

Supplemental Credentials:
* Primary:NTLM-Strong-NTOWF *
Random Value : 637a7e0efe5fbf551a55897e0821b5a4

* Primary:Kerberos-Newer-Keys *
Default Salt : DESKTOP-BSUP848sneed
Default Iterations : 4096
Credentials
aes256_hmac      (4096) : 61744b7ec160f2c79d374ed634d297f963f254264e7a16602c75fa95312610c3
aes128_hmac      (4096) : dbb191dc3ae8a1dbd3d2ce73cff5a8d1
des_cbc_md5       (4096) : ce5438f2f7a85e73

* Packages *
NTLM-Strong-NTOWF

* Primary:Kerberos *
Default Salt : DESKTOP-BSUP848sneed
Credentials
des_cbc_md5      : ce5438f2f7a85e73
```



The image shows a Windows desktop environment with two Notepad windows open and a visible taskbar.

**Left Notepad Window:**

```
File Edit Format View Help
sneed:ad831d13f394a1541c650feef2c66c6c:::
honey:f5794cbd75cf43d1eb21fad565c7e21c:::
```

**Right Notepad Window:**

```
File Edit Format View Help
User : sneed
Hash NTLM: ad831d13f394a1541c650feef2c66c6c

Supplemental Credentials:
* Primary:NTLM-Strong-NTOWF *
    Random Value : 637a7e0efe5fbf551a55897e0821b5a4

* Primary:Kerberos-Newer-Keys *
    Default Salt : DESKTOP-BSUP848sneed
    Default Iterations : 4096
    Credentials
        aes256_hmac      (4096) : 61744b7ec160f2c79d374ed634d2
        aes128_hmac      (4096) : dbb191dc3ae8a1dbd3d2ce73cff5
        des_cbc_md5      (4096) : ce5438f2f7a85e73

* Packages *
    NTLM-Strong-NTOWF

* Primary:Kerberos *
    Default Salt : DESKTOP-BSUP848sneed
    Credentials
        des_cbc_md5      : ce5438f2f7a85e73

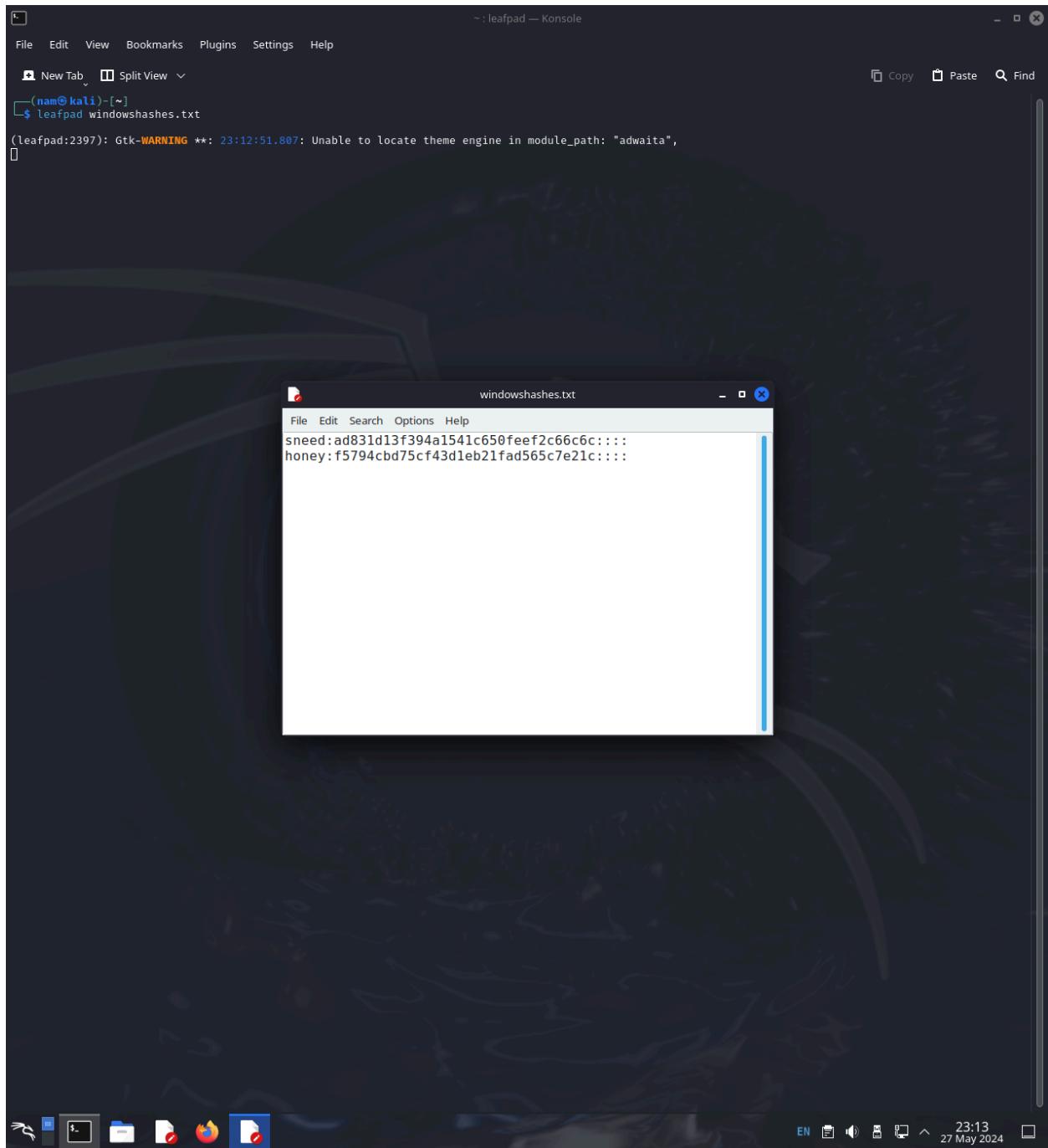
RID : 000003eb (1003)
User : honey
Hash NTLM: f5794cbd75cf43d1eb21fad565c7e21c

Supplemental Credentials:
* Primary:NTLM-Strong-NTOWF *
    Random Value : 433fb3d3cff40a7be63d7ffa892cf626

* Primary:Kerberos-Newer-Keys *
    Default Salt : DESKTOP-BSUP848honey
    Default Iterations : 4096
```

**Taskbar:**

- Start button
- Type here to search
- Icons for File Explorer, Task View, and others
- System tray showing weather (31°C), date (5/27/2024), and time (9:09 AM)



A screenshot of a Kali Linux desktop environment. In the foreground, a terminal window titled "zsh — Konsole" displays the output of a password cracking session. The user ran "crunch 4 4 | sudo john --format=NT windowhashes.txt --stdin" to generate 2284880 bytes of data for cracking. They then used "sudo john --format=NT windowhashes.txt --show" to find two cracked passwords: "sneed" and "mijw..minn". Both were cracked at 81150p/s. Finally, they ran "sudo john --format=NT windowhashes.txt --show" again to verify that all hashes had been cracked. The system tray at the bottom shows icons for network, battery, volume, and date/time (27 May 2024, 23:16). The desktop background features a dark dragon-themed wallpaper.

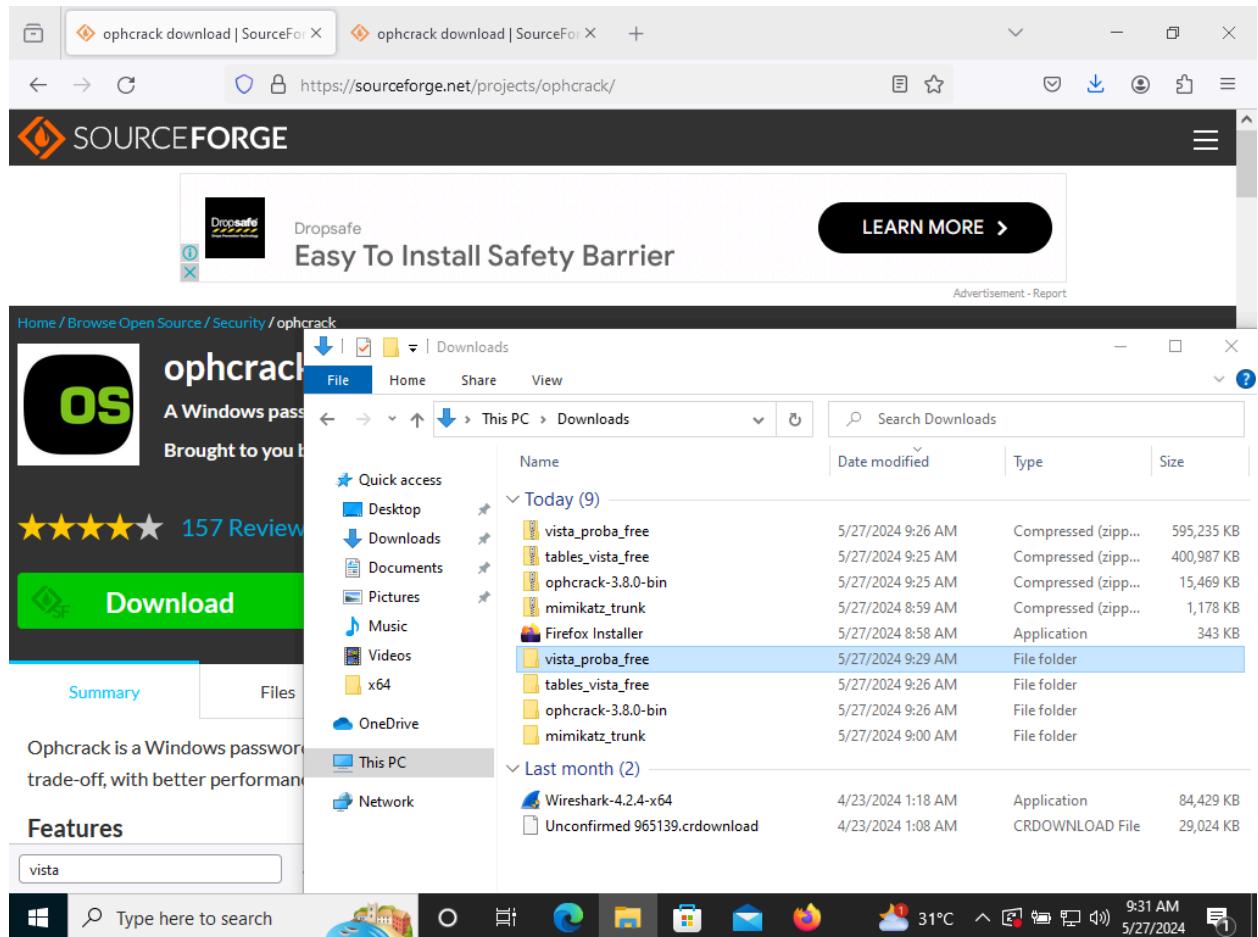
```
(nam㉿kali)-[~]
└$ sudo crunch 4 4 | sudo john --format=NT windowhashes.txt --stdin
[sudo] password for nam:
Crunch will now generate the following amount of data: 2284880 bytes
2 MB
0 GB
0 TB
0 PB
Crunch will now generate the following number of lines: 456976
Using default input encoding: UTF-8
Loaded 2 password hashes with no different salts (NT [MD4 128/128 SSE2 4x3])
Warning: no OpenMP support for this hash type
Press Ctrl-C to abort, or send SIGUSR1 to john process for status
feed      (sneed)
mijw..minn (honey)
2g 0:00:00:02 0.7490g/s 81150p/s 81150c/s 115128C/s mijw..minn
Use the "-show --format=NT" options to display all of the cracked passwords reliably
Session completed.

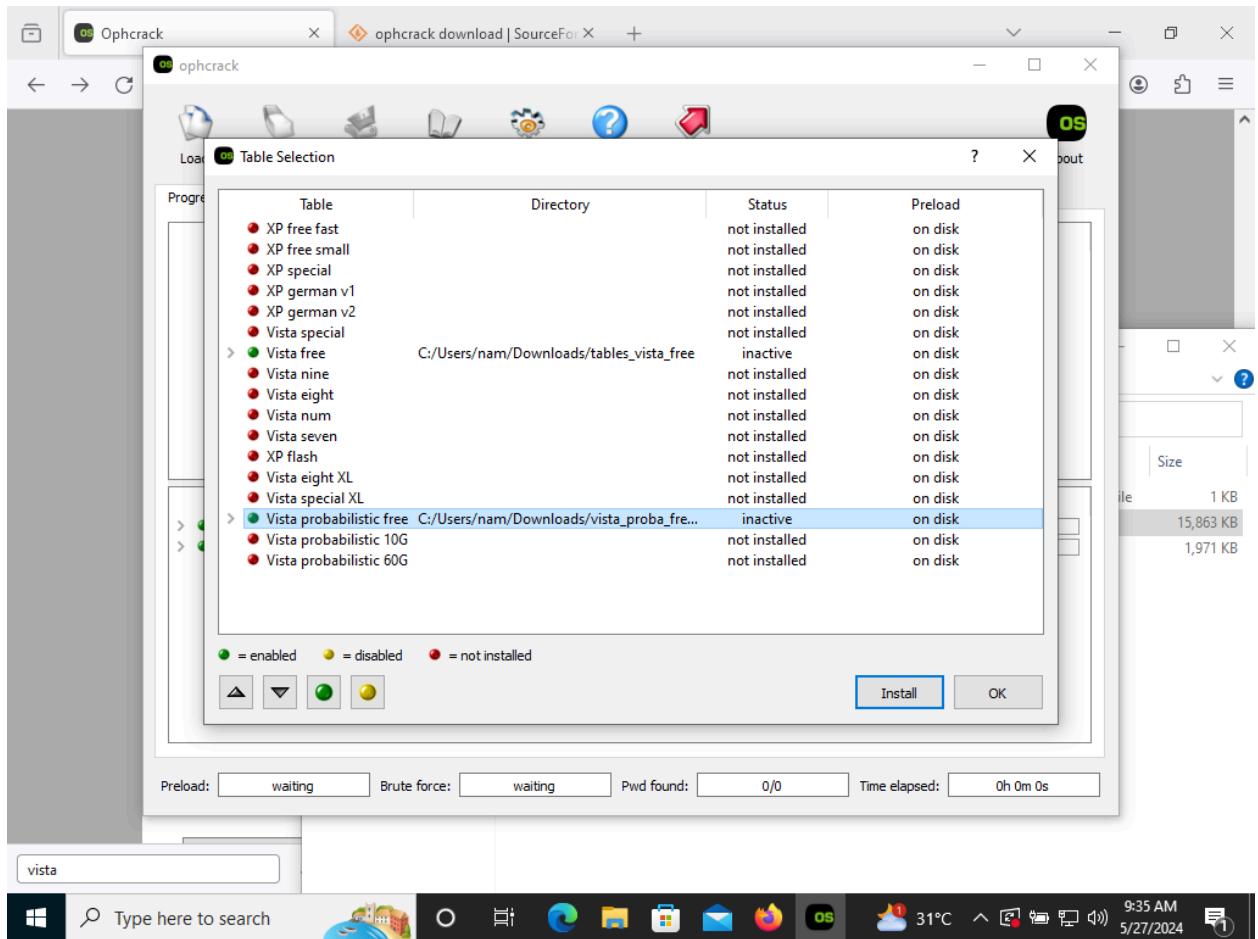
(nam㉿kali)-[~]
└$ sudo john --format=NT windowhashes.txt --show
sneed:feed::::
honey:mijw..minn::::
2 password hashes cracked, 0 left

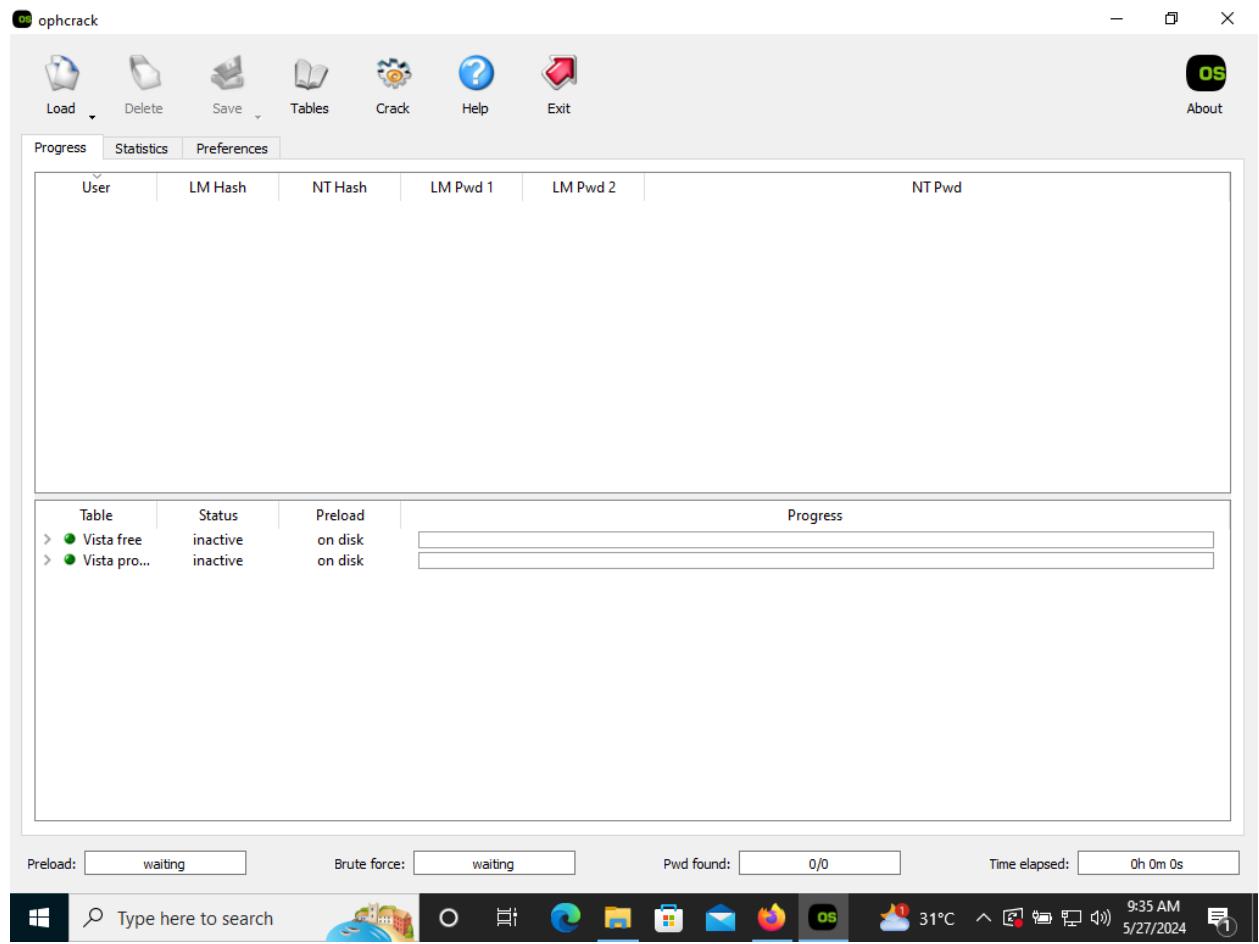
(nam㉿kali)-[~]
└$ sudo john --format=NT windowhashes.txt --show
sneed:feed::::
honey:mijw..minn::::
2 password hashes cracked, 0 left

(nam㉿kali)-[~]
└$
```

11.04







The image shows two side-by-side Windows Notepad windows. The left window, titled 'formattedhashes - Notepad', contains the following text:

```
sneed:1002::ad831d13f394a1541c650feef2c66c6c:::::  
honey:1003::f5794cbd75cf43d1eb21fad565c7e21c:::::
```

The right window, titled 'hashes - Notepad', contains detailed credential information for the same users:

```
File Edit Format View Help  
des_cbc_md5 : 1679fb23f8a1688f  
OldCredentials  
des_cbc_md5 : 1679fb23f8a1688f  
  
RID : 000003ea (1002)  
User : sneed  
Hash NTLM: ad831d13f394a1541c650feef2c66c6c  
  
Supplemental Credentials:  
* Primary:NTLM-Strong-NTOWF *  
    Random Value : 637a7e0efe5fbff51a55897e0821b5a4  
  
* Primary:Kerberos-Newer-Keys *  
    Default Salt : DESKTOP-BSUP848sneed  
    Default Iterations : 4096  
    Credentials  
        aes256_hmac (4096) : 61744b7ec160f2c79d374ed634d2  
        aes128_hmac (4096) : dbb191dc3ae8a1dbd3d2ce73cff5  
        des_cbc_md5 (4096) : ce5438f2f7a85e73  
  
* Packages *  
    NTLM-Strong-NTOWF  
  
* Primary:Kerberos *  
    Default Salt : DESKTOP-BSUP848sneed  
    Credentials  
        des_cbc_md5 : ce5438f2f7a85e73  
  
RID : 000003eb (1003)  
User : honey  
Hash NTLM: f5794cbd75cf43d1eb21fad565c7e21c  
  
Supplemental Credentials:  
* Primary:NTLM-Strong-NTOWF *  
    Random Value : 521a7e0efe5fbff51a55897e0821b5a4
```

Both windows have their status bars visible at the bottom, showing file details like 'Ln 2, Col 13' and 'Ln 111, Col 1'. The taskbar at the bottom of the screen also displays various icons and system status.

ophcrack

Load Delete Save Tables Crack Help Exit

About

Progress Statistics Preferences

User	LM Hash	NT Hash	LM Pwd 1	LM Pwd 2	NT Pwd
sneed		ad831d13f394a1...		feed	
honey		f5794cbd75cf43...		mike	

Table Status Preload Progress

Table	Status	Preload	Progress
> Vista free	inactive	100% in RAM	<div style="width: 100%;"> </div>
> Vista pro...	inactive	89% in RAM	<div style="width: 89%;"> </div>

Preload: done Brute force: done Pwd found: 2/2 Time elapsed: 0h 0m 4s

Type here to search



