

# SEC560— Enterprise Penetration Testing

---

## Terms

/etc/shadow .....	B3: 68	evasion .....	B4: 52-69
admin hunting .....	B1: 63	amsi .....	B4: 56-60
amsi .....	B4: 56-60	application control .....	B4: 72-80
bypasses .....	B4: 58-60	signature detection .....	B4: 64
AmsiScanBuffer .....	B4: 57	static analysis .....	B4: 61
annual reports .....	B1: 68	tactics .....	B4: 52-69
application control .....	B4: 71	windows defender .....	B4: 65
ASNs .....	B1: 75	exploit .....	B1: 11
assumed breach .....	B2: 68	unquoted paths .....	B3: 20
attack phases		exploitation .....	B2: 26-8
covering tracks .....	B1: 17	client-side .....	B2: 32-7
exploitation .....	B1: 17	framework .....	B2: 41
maintaining access .....	B1: 17	local privesc .....	B2: 38
post-exploitation .....	B1: 17	payload delivery .....	B2: 36
recon .....	B1: 17	server-side .....	B2: 31
scanning .....	B1: 17	social engineering .....	B2: 34
authenticated proxy .....	B2: 89	types .....	B2: 30
autonomous systems numbers .....	B1: 75	windows .....	B2: 45, 49-51
BGP .....	B1: 78	file	
browser .....	B2: 46	install files .....	B3: 15-6
browsers .....	B2: 33	iso .....	B2: 101
c2 .....	B2: 72	lnk-shortcuts .....	B2: 103
C:/Windows/Panther .....	B3: 15-6	permissions .....	B3: 10
certificate transparency .....	B1: 79	pilfering .....	B2: 115-6, 132
chaining .....	B2: 80	searching .....	B2: 125, 132
challenge-response		world-writeable .....	B3: 10
Kerberos .....	B3: 99	zip .....	B2: 102
LANMAN .....	B3: 63	file-transfer .....	B2: 109-12
NTLMv1 .....	B3: 63	file/print sharing .....	B4: 42
NTLMv2 .....	B3: 65-6, 100-01	firewall .....	B2: 31, B2: 131
CIDR .....	B1: 78	full-knowledge .....	B1: 26
cmd.exe autorun .....	B3: 40	group policy	
common subdomains .....	B1: 72	objects .....	B3: 17
competitive intel .....	B1: 68	preferences .....	B3: 17-8
cpasssword .....	B3: 15-6	guardrails .....	B2: 35, 80
credential guard .....	B4: 44	hash	
credential reuse .....	B4: 6	formats .....	B3: 68
credential stuffing .....	B2: 9-10	LANMAN .....	B3: 60, 63
crypt3 .....	B3: 58-66	MD5 .....	B3: 69
daisy-chaining .....	B2: 80	NT .....	B3: 61
data breaches .....	B1: 85	rounds .....	B3: 69
data dump forums .....	B1: 85	HKCU .....	B3: 40
dedicated systems .....	B1: 36	html application .....	B1: 68
dhcpcclient .....	B2: 131	impacket	
dirty cow .....	B3: 8	kerberos .....	B4: 33
document-reading apps .....	B2: 33	remote exec .....	B4: 35-7
documented permission .....	B1: 20, 23	secretsdump .....	B4: 34
domain		syntax .....	B4: 35
admin .....	B2: 129	implant chaining .....	B2: 80
administration .....	B2: 126	infrastructure recon .....	B1: 71-81
cleanup .....	B2: 130	ingestors .....	B3: 30
groups .....	B2: 129	initial access .....	B2: 6
users .....	B2: 127	intrusion prevention .....	B2: 31
dynamic code generation .....	B2: 77	ipsec .....	B2: 131
dynamic data exchange .....	B2: 100	jitter .....	B2: 72
env variable .....	B2: 124	job reqs .....	B1: 85
ephemeral shell .....	B1: 47	junior testers .....	B1: 61
		kerberos .....	B3: 99

# SEC560— Enterprise Penetration Testing

---

impacket .....	B4: 33	in windows .....	B3: 58-66
ticket reuse .....	B4: 12	keystroke .....	B3: 54
kernel .....	B3: 8	mangling .....	B3: 51
kernel attacks .....	B2: 39	reporting .....	B3: 56
keyrings .....	B2: 122	salt .....	B3: 61
linux .....		sniffing .....	B3: 54, 100-01
connections .....	B1: 51	syncd .....	B3: 49
filesystem .....	B1: 46	payload delivery .....	B2: 36
permissions .....	B1: 50	payloads .....	B2: 97
suid .....	B1: 51	PCI .....	B1: 61
LLMNR .....	B3: 106	penetration test .....	
local groups .....	B2: 128	definition .....	B1: 15
lockout .....	B2: 15	types .....	B1: 16
duration .....	B2: 16	permissions .....	B1: 50
observation window .....	B2: 16	persistence .....	
threshold .....	B2: 16	cmd.exe autorun .....	B3: 40
logon script .....	B2: 127	HKCU .....	B3: 40
LSASS .....	B4: 41, 77	scheduled task .....	B3: 42
mangling .....	B3: 51	services .....	B3: 43
mDNS .....	B3: 106	startup folder .....	B3: 41
mergers & acquisitions .....	B1: 67	WMI events .....	B3: 43
metasploit .....		pgp .....	B2: 122
exploits .....	B2: 44-7	pivoting .....	
meterpreter .....	B2: 53-60	linux .....	B4: 6, 84-91
modules .....	B2: 44	ssh .....	B4: 87-8
payloads .....	B2: 44-51	windows .....	B4: 9-28
psexec .....	B4: 46	plugins .....	B1: 149
reliability .....	B2: 47	polling interval .....	B2: 72
meterpreter .....	B2: 53-60	port forwarding .....	B4: 5
msbuild .....	B4: 74-80	port scan .....	B1: 94
NBT-NS .....	B3: 106	post-exploitation .....	B2: 108
network sweep .....	B1: 94	powershell .....	
ntds.dit .....	B3: 59, 75	obfuscation .....	B2: 134
NTLMv1 .....	B3: 64	pre-engagement .....	
NTLMv2 .....	B3: 65-6, 100	goals .....	B1: 22
attacks .....	B3: 110	rules .....	B1: 24
defense .....	B3: 113	scope .....	B1: 23
NtProtectVirtualMemory .....	B4: 63	press releases .....	B1: 68
obfuscation .....	B2: 134	privacy regulations .....	B1: 27
office .....		privesc .....	
dde .....	B2: 100	linux .....	
macros .....	B2: 98	files .....	B3: 10
opsec .....	B2: 89	kernel .....	B3: 8
organizational recon .....	B1: 67-9	service .....	B3: 9
os fingerprinting .....	B1: 94	suid .....	B3: 11
nmap .....	B1: 129	local .....	B2: 38
parallel scans .....	B1: 121	windows .....	
parent process spoofing .....	B2: 80	alwaysinstallelevated .....	B3: 14
pass-the-hash .....	B4: 41-9, B3: 54	dll hijacking .....	B3: 14
mitigations .....	B4: 44	group policy preferences .....	B3: 17-8
password .....		unattended install files .....	B3: 15-6
guessing .....	B2: 11-22	unquoted paths .....	B3: 20
spraying .....	B2: 18	writable service executables .....	B3: 14
password attacks .....	B4: 47	privileged process .....	B2: 39
passwords .....		proxies .....	B3: 113
cloud hardware .....	B3: 53	psexec .....	B2: 45
dictionaries .....	B3: 50	purple team .....	B1: 13
in linux .....	B3: 58-66	race conditions .....	B2: 39

# SEC560— Enterprise Penetration Testing

---

recon		
ethics	B1: 64	
infrastructure	B1: 71-81	
internal PCI	B1: 61	
light-touch	B1: 62	
organizational	B1: 67-9	
user	B1: 82-9	
zero-touch	B1: 62	
red team	B1: 13	
regional internet registries	B1: 78	
registry	B2: 133	
registry keys	B3: 40	
reporting	B4: 94-119	
format	B4: 96	
representative sample	B2: 37	
RIRs	B1: 78	
risk	B1: 12	
rules of engagement	B1: 24	
runtime env	B2: 33	
SAM database	B4: 41, B3: 58, 75	
sam database	B2: 122	
scada	B2: 46	
ScanContent	B4: 57	
scans		
asynchronous	B1: 96	
efficiency	B1: 96	
parallel	B1: 121	
stateless	B1: 122	
tcp	B1: 103-4, 115-6, 122	
types	B1: 94	
udp	B1: 106-7, 117	
ultrafast	B1: 122	
vulnerability	B1: 145-51	
scf file	B3: 109	
scheduled tasks	B3: 42	
scope	B1: 23	
security audit	B1: 14	
security identifiers	B4: 44	
sensitive data	B1: 27	
services	B3: 43	
controller	B4: 14	
name	B4: 16	
shared object	B3: 9	
shells		
ephemeral	B1: 47	
prompts	B1: 55	
singles	B2: 48	
situational awareness	B2: 114	
linux	B2: 118-22	
smart cards	B3: 67	
smb	B4: 13, B2: 46	
named pipes	B2: 80	
smb relaying	B3: 111	
smb signing	B3: 113	
SPNs	B3: 99	
ssh		
key theft	B4: 6	
port forwarding	B4: 87-8	
stagers	B2: 48	
stages	B2: 48	
startup folder	B3: 41	
sudo	B1: 52	
suid	B3: 11, B2: 39, B1: 51, 120	
sysvol	B2: 127	
tactics	B2: 108	
tcp	B1: 99-102	
pivots	B2: 80	
RST	B1: 122	
test types		
full-knowledge	B1: 26	
unannounced	B1: 25	
zero-knowledge	B1: 26	
threat	B1: 12	
TLS	B1: 79	
torrents	B1: 85	
UAC	B4: 44	
udp	B1: 105	
unannounced test	B1: 25	
unattend.xml	B3: 15-6	
unquoted paths	B3: 20	
user account control	B3: 21-2	
bypass	B3: 23	
user recon	B1: 82-9	
usernames	B2: 14	
vba	B2: 98	
version scan	B1: 94	
VLANs	B3: 113	
Volume Shadow Copy Service	B3: 74	
VSS	B3: 74	
vuln scanning	B1: 145-51	
agent-based	B1: 148	
authenticated	B1: 148	
plugins	B1: 149	
unauthenticated	B1: 148	
vulnerability	B1: 11	
vulnerability assessment	B1: 14	
vulnerability scan	B1: 94	
web proxy auto discovery	B3: 108	
whois	B1: 78	
windows		
exploit obfuscation	B2: 134	
file/print sharing	B4: 42	
files	B2: 132	
firewall	B2: 131	
passwords	B3: 58-66, 72-7	
registry	B2: 133	
WinInet InternetQueryOption	B3: 108	
WinRM	B4: 10-11	
wlan	B2: 131	
WMI		
event subscription	B3: 44	
world-writeable	B1: 51	
WPAD	B3: 108	
zero-knowledge	B1: 26	

# SEC560— Enterprise Penetration Testing

---

## Tools/Commands

Get-Credential .....	B4: 11	HaveIBeenPwned .....	B1: 85
Test-WSMan .....	B4: 11	Hunter.io .....	B1: 83
arp .....	B2: 116	Hydra .....	B2: 20-2
base64 .....	B2: 112	Immunity CANVAS .....	B2: 39
bitsadmin .....	B3: 26	Impacket .....	B4: 32-7
cscript .....	B3: 74	smbexec/wmiexec .....	B4: 37
dir .....	B2: 124	Iptables .....	B4: 5
findstr .....	B2: 132	JohnTheRipper .....	B3: 83-6
find .....	B3: 12, B2: 132	potfile .....	B3: 83
ip .....	B2: 116	unshadow .....	B3: 71
lsof connections .....	B1: 53	L0phtCrack .....	B3: 59
more .....	B2: 132	LinPEAS .....	B2: 39
msbuild.exe .....	B4: 72-9	LinuxExploitSuggester .....	B2: 39
net.exe .....	B4: 13, B2: 16	LockoutStatus.exe .....	B2: 15
net/net1 .....	B2: 126-30	LOLBAS .....	B3: 26
netsh .....	B2: 131	Masscan .....	B1: 96, 123-5
netstat connections .....	B1: 53, B2: 116	Metasploit .....	B2: 19, B3: 23, 42-60
ntdsutil.exe .....	B3: 76	pivoting .....	B4: 84
ps .....	B3: 9	psexec .....	B4: 46
reg .....	B2: 133	Meterpreter .....	B2: 53-60
schtasks .....	B4: 21, B3: 42	creds <sub>all</sub> .....	B3: 77
sc .....	B4: 14, 23	hashdump .....	B3: 73
services.msc .....	B4: 16	load kiwi .....	B3: 77
set .....	B2: 124	pivoting .....	B4: 85-6
ss .....	B2: 116	Mimikatz .....	B3: 77
type .....	B2: 132	MITRE ATTACK .....	B1: 38
uname .....	B3: 8	MITRE CVE .....	B1: 37
uniq .....	B3: 50	Monster.com .....	B1: 86
winrs .....	B4: 10	MSBuild .....	B4: 72-9
wmic .....	B4: 25-6	NCCrack .....	B2: 19
AD Explorer .....	B2: 135	Netcat .....	B4: 5, B1: 133-8
ALockout.dll .....	B2: 15	nmap .....	B4: 10, B1: 109-21, 129-33
BeRoot .....	B3: 24	limitations .....	B1: 121, 151
BloodHound .....	B3: 30-5	os fingerprinting .....	B1: 129
C2 Matrix .....	B2: 73	script.db .....	B1: 156
Cain .....	B3: 102	scripting engine .....	B1: 153-6
CeWL .....	B3: 51	NPK .....	B3: 53
Chameleon .....	B2: 134	NTDSUtil .....	B3: 76
Cobalt Strike .....	B2: 39	Patator .....	B2: 19
Core IMPACT .....	B2: 36	Pcredz .....	B3: 102-4
crt.sh .....	B1: 79	phonebook.cz .....	B1: 84
DefenderCheck .....	B4: 65	Pipal .....	B3: 95
DeHashed .....	B1: 85	Posh-SecMod .....	B2: 90
DNSDumpster .....	B1: 75-7	PowerBreach .....	B2: 90
DNSRecon .....	B1: 73-4	PowerSploit .....	B2: 90, 134
Dradis Reporting .....	B1: 40	Remove-Comment .....	B4: 62
Empire .....	B3: 23, B2: 88-92	PowerStripper .....	B4: 62
modules .....	B2: 90-2	PowerUp .....	B3: 25, B2: 90
ExploitDB .....	B1: 37	PowerView .....	B2: 90, 134
EyeWitness .....	B1: 140-3	PsExec .....	B4: 18-20
GatherContacts .....	B1: 86	pw-inspector .....	B2: 13
GetFFGP .....		Responder .....	B3: 106-13
FineGrainedPassPolicy .....	B2: 18	RIRs .....	B1: 78
GhostPack .....	B2: 137-9	Rubeus .....	B4: 12
GTFOBins .....	B3: 12	ScanRand .....	B1: 96
Hashcat .....	B3: 89-94	schtasksabuse .....	B3: 42
		Seatbelt .....	B2: 137-9
		secretsdump.py .....	B3: 59

# SEC560— Enterprise Penetration Testing

---

SharpBlock .....	B4: 63	VeilEvasion .....	B4: 53, 69
Shodan .....	B1: 80-1	Verizon DBIR .....	B2: 69
SkullSecurity Passwords .....	B3: 50	VirtualProtect .....	B4: 63
Sliver .....	B2: 76-83	VirusTotal .....	B4: 54
commands .....	B2: 81	VSSAdmin .....	B4: 34
payloads .....	B2: 79-80, 83	VSSOwn .....	B3: 74
server-client .....	B2: 82	Watson .....	B3: 24
UACME .....	B3: 23	WMIC .....	B4: 16