

Scripting Engine

```
-sC Run default scripts
--script=<ScriptName>|
<ScriptCategory>|<ScriptDir>...
    Run individual or groups of scripts
--script-args=<Name1=Value1,...>
    Use the list of script arguments
--script-updatedb
    Update script database
```

Script Categories

Nmap's script categories include, but are not limited to, the following:

auth: Utilize credentials or bypass authentication on target hosts.

broadcast: Discover hosts not included on command line by broadcasting on local network.

brute: Attempt to guess passwords on target systems, for a variety of protocols, including http, SNMP, IAX, MySQL, VNC, etc.

default: Scripts run automatically when -sC or -A are used.

discovery: Try to learn more information about target hosts through public sources of information, SNMP, directory services, and more.

dos: May cause denial of service conditions in target hosts.

exploit: Attempt to exploit target systems.

external: Interact with third-party systems not included in target list.

fuzzer: Send unexpected input in network protocol fields.

intrusive: May crash target, consume excessive resources, or otherwise impact target machines in a malicious fashion.

malware: Look for signs of malware infection on the target hosts.

safe: Designed not to impact target in a negative fashion.

version: Measure the version of software or protocol spoken by target hosts.

vul: Measure whether target systems have a known vulnerability.

Notable Scripts

A full list of Nmap Scripting Engine scripts is available at <http://nmap.org/nsedoc/>

Some particularly useful scripts include:

```
dns-zone-transfer: Attempts to pull a zone file (AXFR) from a DNS server.
$ nmap --script dns-zone-transfer.nse --script-args dns-zone-transfer.domain=<domain> -p53 <hosts>
```

```
http-robots.txt: Harvests robots.txt files from discovered web servers.
$ nmap --script http-robots.txt <hosts>
```

```
smb-brute: Attempts to determine valid username and password combinations via automated guessing.
$ nmap --script smb-brute.nse -p445 <hosts>
```

```
smb-psexec: Attempts to run a series of programs on the target machine, using credentials provided as scriptargs.
$ nmap --script smb-psexec.nse -script-args=smbuser=<username>,smbpass=<password>[,config=<config>] -p445 <hosts>
```



Nmap Cheat Sheet v1.0

POCKET REFERENCE GUIDE
SANS Institute
<http://www.sans.org>

Base Syntax

```
# nmap [ScanType] [Options] {targets}
```

Target Specification

IPv4 address: 192.168.1.1
IPv6 address: AABB:CCDD::FF%eth0
Host name: www.target.tgt
IP address range: 192.168.0-255.0-255
CIDR block: 192.168.0.0/16
Use file with lists of targets: -iL <filename>

Target Ports

No port range specified scans 1,000 most popular ports

-F Scan 100 most popular ports

-p<port1>-<port2> Port range

-p<port1>,<port2>,... Port List

-pU:53,U:110,T20-445 Mix TCP and UDP

-r Scan linearly (do not randomize ports)

--top-ports <n> Scan n most popular ports

-p-65535 Leaving off initial port in range makes Nmap scan start at port 1

-p0- Leaving off end port in range makes Nmap scan through port 65535

-p- Scan ports 1-65535

Probing Options

- Pn Don't probe (assume all hosts are up)
- PB Default probe (TCP 80, 445 & ICMP)
- PS<portlist>
Check whether targets are up by probing TCP ports
- PE Use ICMP Echo Request
- PP Use ICMP Timestamp Request
- PM Use ICMP Netmask Request

Scan Types

- sn Probe only (host discovery, not port scan)
- sS SYN Scan
- sT TCP Connect Scan
- sU UDP Scan
- sV Version Scan
- o OS Detection
- scanflags Set custom list of TCP using URGACKPSHRSTSYNFIN in any order

Fine-Grained Timing Options

- min-hostgroup/max-hostgroup <size>
Parallel host scan group sizes
- min-parallelism/max-parallelism <numprobes>
Probe parallelization
- min-rtt-timeout/max-rtt-timeout/initial-rtt-timeout <time>
Specifies probe round trip time.
- max-retries <tries>
Caps number of port scan probe retransmissions.
- host-timeout <time>
Give up on target after this long
- scan-delay/--max-scan-delay <time>
Adjust delay between probes
- min-rate <number>
Send packets no slower than <number> per second
- max-rate <number>
Send packets no faster than <number> per second

Aggregate Timing Options

- T0 *Paranoid*: Very slow, used for IDS evasion
- T1 *Sneaky*: Quite slow, used for IDS evasion
- T2 *Polite*: Slows down to consume less bandwidth, runs ~10 times slower than default
- T3 *Normal*: Default, a dynamic timing model based on target responsiveness
- T4 *Aggressive*: Assumes a fast and reliable network and may overwhelm targets
- T5 *Insane*: Very aggressive; will likely overwhelm targets or miss open ports

Output Formats

- oN Standard Nmap output
- oG Greppable format
- oX XML format
- oA <basename>
Generate Nmap, Greppable, and XML output files using basename for files

Misc Options

- n Disable reverse IP address lookups
- 6 Use IPv6 only
- A Use several features, including OS Detection, Version Detection, Script Scanning (default), and traceroute
- reason Display reason Nmap thinks port is open, closed, or filtered