



# nmap Cheat Sheet

Built by Yuval (tisf) Nativ from [See-Security's Hacking Defined Experts](#) program  
This nmap cheat sheet is uniting a few other cheat sheets

## Basic Scanning Techniques

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- Scan a single target `nmap [target]`
- Scan multiple targets `nmap [target1,target2,etc]`
- Scan a list of targets `nmap -iL [list.txt]`
- Scan a range of hosts `nmap [range of IP addresses]`
- Scan an entire subnet `nmap [IP address/cdir]`
- Scan random hosts `nmap -iR [number]`
- Excluding targets from a scan `nmap [targets] -exclude [targets]`
- Excluding targets using a list `nmap [targets] -excludefile [list.txt]`
- Perform an aggressive scan `nmap -A [target]`
- Scan an IPv6 target `nmap -6 [target]`

## Discovery Options

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- Perform a ping scan only `nmap -sP [target]`
- Don't ping `nmap -PN [target]`
- TCP SYN Ping `nmap -PS [target]`
- TCP ACK ping `nmap -PA [target]`
- UDP ping `nmap -PU [target]`
- SCTP Init Ping `nmap -PY [target]`
- ICMP echo ping `nmap -PE [target]`
- ICMP Timestamp ping `nmap -PP [target]`
- ICMP address mask ping `nmap -PM [target]`
- IP protocol ping `nmap -PO [target]`
- ARP ping `nmap -PR [target]`
- Traceroute `nmap -traceroute [target]`
- Force reverse DNS resolution `nmap -R [target]`
- Disable reverse DNS resolution `nmap -n [target]`
- Alternative DNS lookup `nmap -system-dns [target]`
- Manually specify DNS servers `nmap -dns-servers [servers] [target]`
- Create a host list `nmap -sL [targets]`



## Firewall Evasion Techniques

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- Fragment packets
  - Specify a specific MTU
  - Use a decoy
  - Idle zombie scan
  - Manually specify a source port
  - Append random data
  - Randomize target scan order
  - Spoof MAC Address
  - Send bad checksums
- ```
nmap -f [target]
nmap -mtu [MTU] [target]
nmap -D RND: [number] [target]
nmap -sI [zombie] [target]
nmap -source-port [port] [target]
nmap -data-length [size] [target]
nmap -randomize-hosts [target]
nmap -spooof-mac [MAC|0|vendor] [target]
nmap -badsum [target]
```

## Version Detection

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- Operating system detection
  - Attempt to guess an unknown
  - Service version detection
  - Troubleshooting version scans
  - Perform a RPC scan
- ```
nmap -O [target]
nmap -O -osscan-guess [target]
nmap -sV [target]
nmap -sV -version-trace [target]
nmap -sR [target]
```

## Output Options

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- Save output to a text file
  - Save output to a xml file
  - Grepable output
  - Output all supported file types
  - Periodically display statistics
  - 133t output
- ```
nmap -oN [scan.txt] [target]
nmap -oX [scan.xml] [target]
nmap -oG [scan.txt] [target]
nmap -oA [path/filename] [target]
nmap -stats-every [time] [target]
nmap -oS [scan.txt] [target]
```

## Ndiff

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- Comparison using Ndiff
  - Ndiff verbose mode
  - XML output mode
- ```
ndiff [scan1.xml] [scan2.xml]
ndiff -v [scan1.xml] [scan2.xml]
ndiff -xml [scan1.xml] [scan2.xml]
```



## ***Nmap Scripting Engine***

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- Execute individual scripts `nmap -script [script.nse] [target]`
- Execute multiple scripts `nmap -script [expression] [target]`
- Execute scripts by category `nmap -script [cat] [target]`
- Execute multiple scripts categories `nmap -script [cat1,cat2, etc]`
- Troubleshoot scripts `nmap -script [script] -script-trace [target]`
- Update the script database `nmap -script-updatedb`
- Script categories
  - all
  - auth
  - default
  - discovery
  - external
  - intrusive
  - malware
  - safe
  - vuln

## ***References***

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- [See-Security's main page](#)
- [Hacking Defined.org](#)
- [See-Security's Facebook Page](#)
- [nmap Professional Discovery Guide](#)
- [nmap's Official Web Page](#)