



nmap Cheat Sheet

Built by Yuval (tistf) 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 | <code>nmap [target]</code> |
| • Scan multiple targets | <code>nmap [target1,target2,etc]</code> |
| • Scan a list of targets | <code>nmap -iL [list.txt]</code> |
| • Scan a range of hosts | <code>nmap [range of IP addresses]</code> |
| • Scan an entire subnet | <code>nmap [IP address/cdir]</code> |
| • Scan random hosts | <code>nmap -iR [number]</code> |
| • Excluding targets from a scan | <code>nmap [targets] --exclude [targets]</code> |
| • Excluding targets using a list | <code>nmap [targets] --excludefile [list.txt]</code> |
| • Perform an aggressive scan | <code>nmap -A [target]</code> |
| • Scan an IPv6 target | <code>nmap -6 [target]</code> |

Discovery Options

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



Firewall Evasion Techniques

- 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 -spoof-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

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

References

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