

# nmap Cheat Sheet



## Installation

```
sudo apt install nmap
```

## Basic usage

Command	Description
<code>nmap &lt;options&gt; &lt;target&gt;</code>	Scan a target
<code>nmap -h</code>	Show help

## Target specification

Command	Description
<code>nmap &lt;target&gt;</code>	Scan a single target
<code>nmap &lt;target1&gt; &lt;target2&gt;</code>	Scan multiple targets
<code>nmap 192.168.1.0/24</code>	Scan a network
<code>nmap -iL &lt;file&gt;</code>	Read targets from a file

## Host discovery

Flag	Description
<code>-sn</code>	Ping scan (disable port scan)
<code>-Pn</code>	Treat all hosts as online (skip ICMP Echo requests)
<code>-PE</code>	ICMP echo request (ping)
<code>-n</code>	Disable DNS resolution

## Scan techniques

Flag	Description
<code>-sS</code>	TCP SYN scan (requires root)
<code>-sT</code>	TCP connect scan (less invasive)
<code>-sA</code>	TCP ACK scan
<code>-sU</code>	UDP scan

## Port specification

Flag	Description
<code>-p &lt;port&gt;</code>	Scan a single port
<code>-p &lt;port1,2&gt;</code>	Scan multiple ports
<code>-p &lt;port1-5&gt;</code>	Scan a range of ports
<code>-p-</code>	Scan all ports
<code>-F</code>	Fast mode (top 100 ports)
<code>--top-ports &lt;n&gt;</code>	Scan the top n common ports

## OS / service / version detection

Flag	Description
<code>-O</code>	Enable OS detection
<code>-sV</code>	Probe open ports to determine service/version info
<code>-A</code>	Enable OS detection, version detection, and scripts

## Script scanning

Flag	Description
<code>-sC</code>	Scan with the default set of scripts
<code>--script=&lt;name&gt;</code>	Scan with the specified script(s)

## Performance

Flag	Description
<code>--initial-rtt-timeout &lt;time&gt;</code>	Set initial RTT timeout
<code>--max-rtt-timeout &lt;time&gt;</code>	Set max RTT timeout
<code>--max-retries &lt;tries&gt;</code>	Set max retries
<code>--min-rate &lt;number&gt;</code>	Set min packet rate

## Timing templates

Flag	Description
<code>-T0</code>	Paranoid (IDS evasion)
<code>-T1</code>	Sneaky (IDS evasion)
<code>-T2</code>	Polite (slow)
<code>-T3</code>	Normal (default)
<code>-T4</code>	Aggressive (fast)
<code>-T5</code>	Insane (very fast)

## Output

Command / flag	Description
<code>-oN &lt;file&gt;</code>	Write normal output to a file
<code>-oG &lt;file&gt;</code>	Write grepable output to a file
<code>-oX &lt;file&gt;</code>	Write XML output to a file
<code>-oA &lt;basename&gt;</code>	Write output in all 3 formats
<code>-v</code>	Increase verbosity
<code>--packet-trace</code>	Show all packets sent and received
<code>--reason</code>	Show the reason for the port state
<code>--stats-every &lt;n&gt;</code>	Show scan statistics every n seconds

## Nmap examples

Command	Description
<code>nmap -sn 192.168.1.1/24</code>	Discover hosts on a network
<code>sudo nmap -sS &lt;target&gt;</code>	TCP SYN scan
<code>sudo nmap &lt;target&gt; -p 80 -sV --script vuln</code>	Scan for vulnerabilities on port 80